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Editorial

THE ARMY VETERINARY SERVICE.

THE dedication to the Army Veterinary Service of a "Special Army Number" by the oldest current British veterinary periodical, the *Veterinary Journal*, will help to forge closer the links in the chain of veterinary history and strengthen the bonds of brotherhood between those of our colleagues who have adopted the army as their profession, and those in private practice; for it must not be forgotten that the first editor of the *Veterinary Journal* on its foundation, Dr. George Fleming (at that time veterinary surgeon to the Royal Engineers) was an army veterinary surgeon and the first Director of the organisation which has resulted in the present Royal Army Veterinary Corps, of which we, as a profession, are so justly proud.

The comparatively small beginning and the gradual development from "regimental" to "departmental" can be readily grasped from a perusal of the articles which follow in our pages; articles written by officers who *know* from practical experience, and not mere theory; and our readers will much appreciate the trouble taken, for the observations made will be a permanent record for all time.

The position of the veterinary officer in the early days was handicapped in a way which the present-day subaltern can scarcely realise, both in regard to pay and rank, and the latter is probably of much the greater importance of the two; for once the rate of promotion is put upon a satisfactory footing the pay becomes adjusted automatically. The transition from the old regimental to the present departmental system has advantages for every side; for the army itself, our own profession, and last (but by no means least) for the welfare of our patients, the sick animals.

The late Great War demonstrated this in a very marked manner, and it is certain that, although improvements may still be made, the present system will always be looked back upon as the framework on which to build.

Probably the greatest compliment which has been paid to the British Army Veterinary Corps organisation is the way in which other countries have studied and imitated it; and there is no question but that if by evil mischance another great war bursts upon us we shall be ready to take the field at once, fully prepared and equipped.

The position of the territorial veterinary officer, too, is infinitely better than it was before the war, and he, too, would *at once* fall into line with his regular confreres.

It would be unjust in an editorial such as this, if one omitted to allude to the apt way in which the so-called " temporary " officer voluntarily came forward and gave his services in the last Great War. Without the help of the civilian who, by leaving his practice when the urgent S.O.S. was issued and donning khaki, became incorporated into the fighting force, the treatment of the tens of thousands of sick animals (without whose restoration to health it would have been impossible to have carried out the essential transport arrangements) could not have been effected; and the way he at once adapted himself to army discipline and army methods was little short of astonishing. It was a marvellous instance of true *esprit de corps*, and there is no doubt that what occurred in 1914 could readily be depended upon to occur again. Our army authorities realise that this is the spirit of Great Britain, as otherwise they would have long ago devised a net which would have caught every veterinary student and graduate in its meshes and compelled him to recognise that his services were " *requisitioned* " by the State *as a right*, instead of trusting him to " play the game " and *volunteer* to " do his bit " in emergency.

General Articles

" FIFTY YEARS AGO."

By Major-General Sir FREDERICK SMITH, K.C.M.G., C.B.

On obtaining my diploma in 1876 I soon got in touch with the principal veterinary surgeon of the army, Mr. John Wilkinson, and within a few days was examined at Woolwich by a Military Board. I did badly, and a slight difference of opinion with one Examiner as to the presence or absence of a cataract led to the Board examining the eyes, with the result that the weight of opinion was in my favour. The result was calamitous, as the Examiner fell down in a fit and had to be removed by ambulance, so the Board was incomplete. An attempt was made to come to a conclusion on the general results of the examination, but the Board was divided, and to my deep chagrin my examination was " deferred " for a few months—a kindly expression which, perhaps, softened my first serious reverse. I have never since ceased to thank the senior officer of the Board, who insisted on my rejection, and very properly urged me to go at once and see practice. Within a week I was in the thick of a large London

practice as an assistant, where I worked day and night for some months. At my next examination Mr. James Collins was Principal Veterinary Surgeon. Having all the confidence and assurance of youth, together with a little knowledge, I felt no difficulty facing the new Board.

In those days you entered, as at present, as a probationer, but without a guide or mentor. I was at once placed in charge of a brigade of artillery consisting of eight batteries, without a soul to give me an idea of service methods, etiquette, or the mode of dealing with officers, N.C.O.'s and men. One had simply to try and muddle through, moving warily in case of stepping unintentionally on toes, and keeping one's eyes open in order to learn how the machine was run. There was no drill, no riding-school, no one to see you were correctly dressed or "set up"; no information given of the diseases and injuries peculiar to army animals, or of methods of inspection. But there was a daily attendance at the Royal Horse Infirmary, where one learned the method of keeping records and the correct mode of conducting official correspondence; but the impression left was that, providing the returns were regularly and correctly delivered, nothing else mattered. Here all the veterinary officers of the garrison met every morning, and attended to their cases in the only General Hospital in the country. There was an officer on duty for the week who attended parades, accidents or cases of urgent sickness, and was present at evening stable hour at the R.H.I. This, however, was a farce. The stable hour was conducted by an old sergeant of artillery, a terrible martinet to the recruits who were always detailed for the care of sick horses. He had a voice of thunder and the manners of a savage. He issued his orders without respect to the presence of an officer and even dismissed the parade without the least reference or authority. It was evident that Sergeant Thrupp had to be taught his duty. This did not take many minutes to effect, but behind him was the Staff V.S., whose annoyance at his hospital sergeant being interfered with was remarkable. For years he had occupied his position, and no orderly officer had previously questioned his want of discipline and casual manner. Things had moved so smoothly that the S.V.S. could not understand any interference on the part of a newly-joined officer. Nevertheless, Sergeant Thrupp was soon rendered very tame, to the great advantage of all. On leaving the service he found his way to the House of Commons, though not as a legislator.

Probationary period was a matter of weeks or months, dependent entirely on the number of officers required for foreign service. If the relief season was at hand, two or three months sufficed, and since there was no training in one's duties, it really made no difference

whether the period was long or short. Moreover, there was no case on record of a probationer being found unsuitable. Commissions were, in the first instance, changes to the Royal Artillery. Cavalry regiments were all occupied. Even if an officer was uncomfortable, a change was very expensive, for, with the exception of saddlery and boots, practically nothing of the old kit was suitable for the new regiment.

The first deduction from your pay was for the Band fund—in the artillery, one day's pay a year, but heavier in cavalry. Then came mess subscriptions, which were moderate in artillery, but frequently heavy in cavalry. In horse artillery and cavalry you had to provide your own horse and its forage. Field Artillery, Army Service Corps and Engineers' horses were provided for parade purposes only. Quarters, fuel and light were provided, and some very rudimentary barrack furniture—two wooden chairs, table, fire irons, coal scuttle and candlestick. Everything else had to be hired. There were no allowances. The regiments of so-called heavy cavalry never went abroad, and were greatly sought after. The bulk of the foreign service fell upon the artillery veterinary officers, but whether with cavalry or artillery, you went abroad with your regiment or brigade, as the case might be, for the full period of its tour, which, when I joined, was 12 years.

There was little or no communication between veterinary officers of different corps. There was, of course, no annual dinner, as our Service did not exist. Our officers met but seldom ; generally only at the offices of the P.V.S., if their visits there coincided. In consequence, there was no unity or cohesion ; the officers were not even known to each other, unless their College periods had coincided.

In artillery the discipline was always strict. Off parade there was unbending as high as captains, but majors were stiff and formal, and lieut.-colonels difficult of approach. I remember a senior medical officer of artillery addressing a colonel by his rank, and being ordered, without hesitation to address him as "Sir." In cavalry there was greater freedom, though the lieut.-colonel generally remained aloof, even from men with whom he might have lived the greater part of his life. The regiment was managed by the adjutant and regimental sergeant-major. Troop officers, as they then were, had no voice. The management of troop affairs, even the paying of their men, was effected by the regimental paymaster ; the feeding of both men and horses by the quartermaster, acting under the instructions of the lieut.-colonel commanding. Real soldiering and training were practically unknown ; outside show and pipeclay received rigid attention. Sunday was generally selected for the commanding officer's inspection

of stables. His visit was an important event to which ladies were invited. The horses were bedded down up to their hocks and special mats made of straw ran the length of the stable behind the horses. On the floor of each stable was the regimental badge made by dusting bran through a tinplate. The saddlery on the racks was immaculate; even the panels being pipe-clayed, to the ruination of fitting. Everybody was present at the ceremony, the C.O. and his visitors being accompanied by a large staff in which, of course, the Veterinary Officer had to appear, but well at the back.

The system of dealing with the sick varied with the regiment. In some, all cases were reported; in other cases they were hidden, the horse being wanted for parade or other purposes, and treated secretly in the troop stable. In some regiments, especially what were called the "old regiments," the "sick lines" had the nucleus of a permanent staff. Old soldiers, who, from various causes, such as putting on weight, were unfit for the ranks, were generally selected. Everything depended upon the good will of the troop sergeant-major, who dealt with questions of this kind, and many others, with the authority of a "Sergeant Thrupp." In all regiments the iniquitous system was followed of sending recruits to look after the sick, or a fresh man at each stable hour. The great complaint on the horses being returned to duty was their want of cleanliness and want of condition. "Just come out of the sick lines" was the invariable reply to any unfavourable criticism passed by the C.O. The regimental system of supplying recruits and wasters to look after sick horses was primarily responsible for the trouble.

Horses were singed in the winter, but not clipped. Clipping came in very slowly, for blankets were not allowed. The clipped horses were protected for the first day or two with blankets borrowed from the much despised "sick lines."

There was a rigid regimental system of stable management, good or bad, which could not be departed from without authority. The only voice the Veterinary Officer had was in the matter of ventilation. The ventilation to be adopted was entered on the back of the morning report, which had to be at Orderly Room some time before "dismiss" sounded.

In some regiments Orderly Room was a ceremonial event at which every officer had to be present in case the colonel wished for information. It was an absolute waste of time, but pleased the vanity of those in authority.

In all regiments the supervision of shoeing was regarded as the veterinary officer's chief duty. It took some years to teach that the troop officer had a responsibility in the matter, and that the

chief duty of the veterinary officer was to ensure that the men were properly trained and adequately taught. In some regiments a man never got beyond blowing the fire and taking shoes off. It was far easier for the farrier to put a set of shoes on himself than stand over a man and instruct him how to do it.

The nails were hand-made, nail-rod of Swedish iron being employed. One day a week was generally devoted to nail-making, and some men became extremely expert. The farrier shod the horses by contract, a halfpenny a day per horse. It paid him, though wild horses would not have extracted what his actual monthly profit amounted to. Farriers at that time were without rank, and were only sergeants by virtue of the stripes on their arm.

The farrier " in clean stable dress," which was generally represented by an ancient pair of overalls well-marked with hair and grease on the seat, and a leather apron, went round during stable hour with a bottle of wound dressing which was applied with a stick and piece of tow. All cuts received a dab from this bottle, which generally contained tincture of myrrh and aloes—a preparation in great request. Later it was replaced by carbolic oil. His hands were unwashed, but we must not be hard on him, for we know how slowly clean surgery infiltrated.

Sore backs were almost unknown, excepting on the line of march. They were unknown for the reason that the horse did very little work ; and when they had to carry a man for hours on the march, the back suffered. Only one cause of sore back was known or recognised : the man must have been rolling in his saddle, and he was accordingly punished. This led to cases being concealed, and there was misery for both man and horse. It took years to teach the cavalry that sore backs were due either to want of condition or defective fitting, and that the men, instead of being punished, should be in every way encouraged to report the most trifling abrasion. I had the greatest difficulty in getting this maxim placed in large type in the official handbook of sore backs published later.

When I joined the cavalry I hoped to learn something of a subject in which I felt a great interest. There was no one to teach me ; the saddler-sergeant was an excellent workman, but he knew nothing of backs.

I accordingly set to work, beginning with a study of the structure of the back ; its anatomy and physiology, and then seeking the cause of injury, the seats of which I found could be readily classified. As every injury corresponded to some defect in the overlying portion of the saddle, it was not a difficult matter to ascertain what the particular defect was. In the course of a few years sufficient information had

been collected to enable one to speak and write with authority. The preservation of the back was obviously of paramount importance. Finally, a manual was written and after considerable delay and opposition from the saddlery department of the War Office and others, was accepted as a military text-book. It ran into several editions, and, later, harness and collar injuries were studied on similar lines and the results embodied. The book aimed at a scientific and practical exposition of the subject, enabling officers to know with exactitude the cause of an injury, how to determine it, and what to do to prevent further trouble. A comment made to the writer by a certain young cavalry officer put the situation in a nutshell: "We now know the grammar of the subject and can go ahead." The speaker was the present Field-Marshal Earl Haig.

At that time the army was being trained and the cavalry worked, a thing unknown in the past, and during the drill season considerable practice was afforded officers, while after manœuvres large classes were held for practical demonstrations of cause, effect and prevention.

The remounts for cavalry were purchased regimentally, the consequence being that regiments were very unequally horsed. Everything depended upon the judgment of the C.O.; who, in many, probably the majority of cases, depended upon his dealer. The veterinary surgeon sometimes, but not always, accompanied the C.O. In the artillery a different system existed. The horses were purchased by a selected artillery officer, and were only very rarely sent direct to batteries—but generally to the artillery remount depôt at Woolwich. The artillery horse was hard to find (horses always have been), for the R.H.A. insisted upon quality and size. The draught of the guns must be upwards, and they stuck to the system of shift draught, which every other artillery in Europe had discarded. Shaft draught required a powerful pair of horses in the "wheel." A good pair of wheel horses were beyond price. It took long years to make the artillery believe that pole draught was simpler, and the gun as much under control as in shaft draught. The remount work was greatly simplified by the change.

The Royal Artillery was sharply divided into fast and slow-moving artillery. The former was a positive fetish. Not only was more money paid for their horses, but in order that there should be no loss in pace, they placed a 9-pr. muzzle-loading pop-gun behind six horses! At this time the bulk of the artillery was concentrated at Woolwich, and during the show season the great event of the "review,"—a regularly set piece—was the gallop past of the R.H.A., two guns abreast, to the top of the Common. They subsequently formed a long line and advanced at the gallop towards the reviewing

officer. The whole line was suddenly halted by the command "Action front," and then occurred the excitement of the day, i.e., which battery would get off the first round. The muzzle-loading absurdity was supplied with a cartridge taken, not from the limber box, but from inside the main jacket! It was rammed home, and in such a desperate hurry was the gun detachment, that the rammer's arms were sometimes not out of the way of the muzzle before the gun was fired. These were field manœuvres of the artillery, and "the Duke" grunted his extreme satisfaction. At this time the Field Artillery had to play a very humble part. Pace was no consideration, and they were loaded up with a collection of paraphernalia which on service would have to be shed. Everything—gun carriage, wagons, harness, etc.—was built to last for years. The forge wagon weighed two tons, and four of the worst horses of the battery were detailed to pull it along. A set of harness was an appalling weight. All the collars opened at the top and were closed by a strap, nothing resembling the civilian collar being used in the service. The lot of an artillery driver with a pair of horses, two sets of harness and many chains to keep bright, was not a happy one. The chains were polished by being swung from side to side in a rubber. Lord Wolseley said that the last sight he saw at Aldershot before leaving on service, was a driver polishing his collar chains. He was away for some time and when he returned he found the man still hard at work!

It was not until you got to India that real soldiering was experienced with regiments and batteries at war strength. India, unquestionably, was the real school in which we were educated. I regret to learn that as a training ground it is likely to be closed to the home branch of the R.A.V.C.

Having received no instruction before leaving England as to what diseases were peculiar to India, nor on the system of stable management and horsemastership, I had to set to work and learn. The disease which created in me the greatest curiosity was Bursattee, and during the whole of one hot season I worked on the microscopic structure of the growth, and eventually sprained the ciliary muscle of my eye. For years afterwards I never looked through a microscope.

Temperance was at this time steadily gaining ground both in and out of the service, but there was still a good deal of drinking on "guest nights," and temperance—or rather total abstinence—men, had to withstand a great deal of chaff; and, not infrequently, scorn. One of the earliest pieces of advice given me on arrival in India was from an old toper, who informed me that in that country "I must keep my liver afloat." Of the many social changes I have seen, that of the spread of temperance has been the greatest.

Fever, cholera and enteric were pests. In one station I was in, cholera was present the greater part of the year, and battalions were seriously depleted by death. Cholera camps for mounted troops gave more difficulty than for infantry. Sometimes the urgency was so great that the horses were left behind and the men marched about the country; "an endeavour to get rid of the disease which was always attributed to something in the wind!" The same was said of anthrax in horses, of which outbreaks were numerous. It was not until near the end of my service in that country that a disaster of magnitude revealed the fact that cholera might be consumed. Sand was used for filtering the water for the barrack rooms, and in the case of this particular regiment, was actually taken from the site on the river bank used for depositing the dead from the neighbouring city, where natives were dying in large numbers. This regiment drank an infusion of cholera from the dead bodies, with terrible results. It led to an enquiry, and the filter story came out. In course of time it became established that what we all feared, "catching cholera," was a myth, and that the germs were taken in with food or water. About the same time we learned that anthrax was also due to germs of the disease taken in with the food; and, many years later, that the malaria, which we believed came out of the ground, was due to an organism distributed by the mosquito.

Tricks, or attempted tricks, were played on young veterinary officers in connection with the casting of horses. A favourite method was to send the casting return, made out by the C.O., "always lame," "blind," "foundered," etc., to the unwary veterinary surgeon for signature, without the horse first having been seen. The signature was "merely a matter of form." I remember a senior officer of our service saying that he was ordered by his commanding officer to sign a casting return. He told the story in the presence of the Staff Veterinary Surgeon (who, it should be added, had blocked this particular officer's promotion to administrative rank). "Did you sign it, Y?" "Yes sir!" "I am astounded! Would you have shot a man had you been ordered?" The reply came simply, and with unmistakable ferocity in his face: "It would have entirely depended upon the man I was ordered to shoot, Mr. Z!" There was a certain officer of artillery, a well-known "coper," who sold his remount horses to subaltern and other officers. The veterinary officer in charge of his battery very rightly would not examine any animal he was selling, and warned me that I was going to be asked to see a particular horse. The seller came to me one morning with a bright, cheerful face and hearty "good morning"; this from a man who had never previously taken the trouble to return my salute! Just as a

matter of form, the purchaser of one of his horses required a certificate ; would I kindly do the needful ? I need hardly say a certificate of unsoundness would have been no use for his purpose, so I told him I would have nothing to do with horses he was selling. " I don't believe you know a damn about your profession," was his immediate reply. I suppose that was the reason he consulted me !

I look back and wonder how our officers weathered the storm on 10/- a day and no allowance, excepting fuel slight in kind. If you lived out of barracks there was no lodging money, no ration allowance ; there was nothing but the 10/- a day, and out of that everything had to be found. In other words, you had to live very economically and seek a cheap regiment. In this connection it may be remembered that we served for 10 years (many for 12) on 10/- a day, and waited another 10 years before getting a second step in promotion !

No one can think or write of the army of 50 years ago without recalling the Duke of Cambridge. He frequently employed very florid language, expressing approval or disapproval at his inspections. Some years before my time he was going round the stables of a certain regiment he favoured, and his expressions of approval of the *fatness* of the horses were exuberant. It so happened that belonging to that regiment was a deeply religious veterinary surgeon whose excitement at the various " By God ! " could no longer be restrained. He forced his way to the front, faced the Duke with a stern expression on his face, and shaking his forefinger in his face said, " Thou shalt not take the name of the Lord thy God in vain." The scene can be imagined but not described. All the Duke could blurt out was " Who is this lunatic ? " The officer was retired in due course.

Many years later when he had become old, fat, and desperately autocratic, the Duke was persuaded to look at the specimens of gunshot injuries produced on the bones of horses by the then new Lee-Metford bullet. I had to demonstrate them. He took a languid interest, for he desired no change in armament. One particularly pulverized preparation caused him to halt, and looking at me he roared out, " Only one bullet? " " Yes Sir," I replied. " I don't believe it ! " was his courteous rejoinder.

Another story in connection with the introduction of the Lee-Metford rifle may now be told. Nearly all the actors have passed away. Horses were required for these experiments, and it was natural that those for casting should be selected. Orders were accordingly issued that on a certain day a particular garrison should send six *cast* horses to Enfield. That at least was the order which *should* have been issued. As a matter of fact, probably owing to some verbal communication, a certain battery commander was directed to send a

picked team of horses to Enfield, where some distinguished people were expected to be present! These horses, in charge of their drivers and a N.C.O., accordingly took their way to Enfield marshes, and on the arrival of the Committee, the exclamation on the lips of all was "What fine horses! What are they cast for?" No one connected with the horses could give any explanation. The veterinary department was well represented, from Dr. Fleming downwards; and the Small Arms Committee was in full force. Hesitation and delay in carrying out the necessary destruction was ended by the President, who said that there could, of course, be no doubt, as orders had been issued by the War Office, and the authorities of the garrison concerned knew precisely for what purposes the horses were intended. One by one, as required, they were shot. By the time the fifth horse had been fired at I declared my inability to undertake further dissections, as the specimens already numerous would get mixed. The type of bullet employed on each horse was distinct—Italian, French, German, English, and so on. The remaining horse, the three drivers and N.C.O., returned to their battery, and the calamity came to light. It was impossible to hush the matter up, and a question was to have been asked in the House. This was avoided by the Secretary of State promising that the delinquent should be punished, and the battery commander, who, I believe, was not to blame, was called upon to retire!

One closing remark on this disaster may be made. Among the spectators present was Mr. James Lambert, who subsequently became Director-General, A.V.D. On being informed of the calamity he remarked that he was not surprised; anything the veterinary service had a hand in went wrong! This was the key-note to his subsequent administration.

For long years after the abolition of regimental medical officers, the wrangle regarding military rank for medical officers still went on. The combatant caste were disgusted at the proposal. Men of what was then the Army Hospital Corps could be dealt with by medical officers for neglect of technical, but not of military, duties. The discipline and interior economy of this body was placed by the military authorities in the hands of ranker "Officers of Orderlies!" The result of such dual control can be imagined. Medical officers were punished, if I may use the term, for their persistency, by the plainness of the dress laid down for them. The attitude of the War Office, even in the matter of uniform, was deplorable and readily adopted by junior officers who would address even a Surgeon-General by his surname, without the polite prefix of Mr. or Doctor. It took years to teach the elementary lesson that every officer in an army must have

not only the outward and visible signs of his rank, but in addition must possess actual rank if his status and position are to be maintained. Curiously enough, non-compound rank was given to Regimental Paymasters who in many cases were civilians pure and simple. It is true that some regimental officers passed into their ranks, but there were many who came in direct from outside, a heavy bond being demanded by the State for their integrity. These officers in due course became captains and majors, and no one expressed surprise, but when the Medical, and later the Veterinary Officer, asked for protection, the Service was scandalized!

THE ROYAL ARMY VETERINARY SCHOOL, 1880--1925.

By Colonel A. G. TODD, C.B.E., D.S.O.,
Deputy Director of Veterinary Services, Southern Command.

Prior to 1878 the teaching of the systematic care and management of animals in the British Army was negligible. What little was done was carried out by Regimental Veterinary Surgeons who were enthusiasts in this direction, and the results varied with their capacity for teaching and the co-operation of the commanding officer of the unit concerned. Far-seeing and progressive leaders in military administration realised that such instruction should be placed on a systematic basis. In doing this they were legislating for the new officer whose advent with the abolition of the purchase of commissions had brought about a complete revolution in military thought and administration.

Mr. James Collins, the Principal Veterinary Surgeon to the Forces, was a man of very advanced views, who was trusted by the authorities. He had seen the results of skilled training in the first Army Veterinary School ever created at Poona in 1865, which was directed by an extremely able and gallant officer, the late Mr. William Lamb, of the Bombay Veterinary Service. Mr. Collins, who was administrative veterinary officer in the Bombay Presidency for some years, brought back to this country a deep impression of the value to the service of such training, and when he came into office in 1876 the formation of an Army Veterinary School was one of the earliest questions to which he directed the attention of the authorities.* The School projected by Mr. Collins was intended to serve several functions; the combatant officer was to be taught the care and management of animals under all conditions of Army life, the selection and purchase of remounts, and first aid treatment in the absence of skilled advice;

* For the early history of the Royal Army Veterinary School, the origin of the Vaccine Institute established in connection with it, and for many valuable suggestions, I am indebted to Major-General Sir F. Smith, K.C.M.G., C.B., who has supplied me with extracts from his "History of the Royal Army Veterinary Corps," now in the press.

probationary veterinary officers were to be trained in their military duties, instructed in the diseases and injuries peculiar to Army animals, especially those diseases met with in tropical countries, with special instruction in the care, management and diseases of all species of animals employed in transport service; regimental farriers and shoeing smiths were to be trained as hospital assistants, both in the care and nursing of the sick, and in the dispensing and administration of medicines. But apart from these functions Mr. Collins proposed that the School should be a centre of research. This fact only came to light in 1925 when Major-General Sir F. Smith found the original paper in the Public Record Office, and Mr. Collins' words on the subject have been given to me for reproduction :—

He begins by informing the authorities that the instructors of the School must not be classed with the instructors of Musquetry and Garrison Classes. "I desire that the Veterinary Instructor should be something more than these. He will require close application, constant observation, study and original research. He will require to travel in order to ascertain what is doing in Continental Veterinary Schools, and gather information from every source to impart to his class of Veterinary Surgeons. All this will entail demands on his income." This far-seeing man realised the value of research work, but it is evident that his ambitious programme could not be carried out single-handed. It was another eight years before research was undertaken, or that an instructor toured the Continent, at his own expense, in order to acquire technical information for the benefit of the Army.

The School was opened at Aldershot on June 1st, 1880, and the Artillery School at Woolwich, which had been formed by Mr. Collins in 1878, was merged into it. Veterinary Surgeon 1st Class J. D. Lambert was appointed Instructor, and a Committee, consisting of the G.O.C. of the Division, the G.O.C. of the Cavalry and Royal Artillery, and Divisional Staff Officers was formed to administer it. The most enthusiastic member of the Committee was Major-General Sir Frederick Fitz-Wygram, Bart., who as a soldier and member of the profession, knew how great were the deficiencies of the Army in the matter of animal management. He entered heart and soul into the scheme, and there can be no doubt that his moral support of Mr. Collins saw the matter safely through some of its difficulties. Being on the spot at Aldershot he was able as a member of the School Committee to watch over and support its interests, and this enthusiasm for the School he carried with him into retirement.

The P.V.S. attended the opening lecture and remained in the service sufficiently long to see the School established on a firm foundation. For 20 years the School was accommodated in an old Balaclava

hut, situated in the Stanhope Lines (Fig. 1). Mr. Collins would be proud if he could see the present admirable buildings (Fig. 2) and know what good work has been, and is being accomplished. He would realise that one of the cherished objects of his enlightened administration had proved to be among the most valuable institutions in the Army.

A rate of pay of £150 a year was given to the Instructor, but the financial authorities would spend no money on the scheme, and the P.V.S. had actually to surrender one of his few staff appointments in order to secure a stipend for the Instructor! An administrative appointment at the Curragh was given up through this parsimonious policy. When the activities of the School rendered a second officer necessary, the Treasury met the financial difficulty by paying the senior officer two-thirds of his annual stipend and giving the remaining third to his assistant! Not one farthing had this School added to the burden of the State during the first quarter of a century of its existence! When it took on the function of supplying the Army with calf lymph, thus saving a position of great peril and difficulty, extra pay was refused the officer who initiated the scheme and carried it safely through.

It is pleasing to record that research workers in the Army now receive extra pay, and that original or valuable work is occasionally rewarded by a decoration or by brevet promotion.

The course of instruction for combatant officers and N.C.O.'s embodied :—

1. Conformation ; the points, form and action ; age. Types of horses required for service.
2. Management of horses—
   In stables.
   On the line of march.
   In camp.
   Their feeding, grooming, bedding, picketing and general sanitation.
3. Saddlery and sore backs—structure and function of the back. Descriptions of saddlery, causes and prevention of saddle and harness injuries.
4. Shoeing : the Service and other methods. Elementary structure of the foot.
5. Conveyance of horses by land and sea.
6. First Aid to sick and injured.

The duration of the course was five weeks, and it was given three times yearly. At the end of each course officers were examined by a Board of Army Veterinary Officers and those who passed satisfactorily were registered as " passed."

To make the instruction as practical as possible the sick and lame horses of the Command were placed at the disposal of the officer in charge of the School. When animals died or were destroyed on account of disease or injury, interesting lesions were sent to the School to be added to the museum. The nucleus of the museum was that which existed at the Royal Horse Infirmary, Woolwich; on the creation of the Army Veterinary School this was transferred to Aldershot and has gradually become a valuable source of information and reference.

At a later period an advanced course was formed for veterinary officers who had returned from a tour of foreign service, and were desirous of bringing themselves up-to-date in their duties.

Until the Aldershot School was started there was no place out of India where farriers and shoeing smiths could be trained as hospital assistants; a little regimental training was given, but it was not

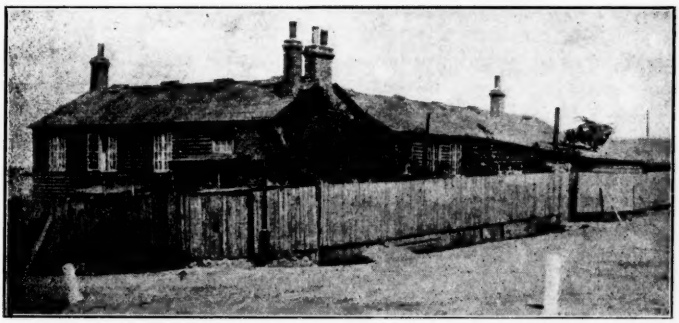

FIG. 1. The original Army Veterinary School.

systematic. It was not until after the School was established that any provision was made, other than regimental, for the care and accommodation of sick animals in war. So called "Sick Horse Depots" were then formed on paper, and the intention was to staff these depots with the men trained at the School. All familiar with active service conditions knew this scheme to be impossible, for commanding officers would not part with their farriers and shoeing smiths at a time when every hand was required to keep the horses shod. Into these depots on service drifted the flotsam and jetsam of regiments and the very first campaign which occurred after the Army Veterinary School had started, revealed the impossibility of depending on this method of supplying a subordinate veterinary service.† It also revealed the hopeless character of sick horse depots

† See the Veterinary Report, Egyptian Campaign, 1882, by Principal Veterinary Surgeon J. J. Meyrick, C.B.

as then organised ; but they nevertheless figured in our War Establishment for another 16 years.

In every subsequent Campaign Report issued by the Army Veterinary Department, the absence of hospital personnel, skilled and unskilled, is mentioned. For years and years it was urged by those with experience of active service under modern conditions, that only one obvious method existed ; but the hand which divided one officer's extra duty pay between two was at work ; and the suggestion that men should be specially trained for hospital duties and no other, was quickly turned down on the score of expense. In the case of small expeditions, such as Suakin and Bechuanaland, it was possible to borrow the trained men from regiments which were not under orders, or likely to be, but there was always a *proviso* that if the regiment was required for service the men were to be recalled forthwith.

The training of regimental farriers and shoeing smiths was, however, an excellent thing for regiments, though a hopeless scheme for providing the Army Veterinary Department with a body of trained subordinates for veterinary hospitals in war. It was calculated that about 400 men would be available from this source ; they were registered by the P.V.S. at the War Office and carefully followed throughout their service until transferred to the reserve. After nursing this obviously defective scheme for years, the war in South Africa put an end to it, and the country had to face the basic fact that a distinct and whole-time service was required for veterinary hospitals. This did not interfere with the training of regimental farriers and shoeing smiths at the School, which was continued so that first aid to animals could be rendered regimentally.

Opinions varied as to the scope and ultimate object of the instruction given to combatant officers. Some staff officers were under the impression that it would in time render the Service independent of the veterinary profession ; whilst others, prominent amongst whom was Lord Wolseley, were of opinion that the courses should be limited to the teaching of the prevention of disease and injury so that animal efficiency would be considerably increased. So keen was Lord Wolseley on this function of the School, that he published an Army Order that no mounted officer would be promoted until he had passed through the School, but the Committee of the School subsequently induced him to cancel it.

The prevention of disease and accidents has been the keynote in the instruction of combatant officers ; the Army Veterinary Service from its inception has kept this always in view and is regarded as the pioneer in preventive veterinary medicine not only in this country but in Europe. Its officers are recognised as the responsible

advisers in all matters relating to the health of animals in the Army.

Returning to the history of the School, in March, 1881, owing to the promotion of Veterinary Surgeon 1st Class J. D. Lambert, the appointment was conferred on Veterinary Surgeon 1st Class W. B. Walters (now Colonel Walters, C.B., A.V.S., Retired Pay), who held office until August, 1883. In addition to instructional duties the officer in charge had veterinary care of the animals of the Military Mounted Police in Aldershot and those of the Staff College and Royal Military College at Sandhurst. Although this duty was not onerous it frequently interfered with the lectures and demonstrations and a veterinary officer had to be lent to the School to relieve the instructor of all executive work.

The painstaking efforts of Veterinary Surgeon Walters to make the instruction as thorough and practical as possible, and the success obtained by the pupils at the examination, were highly appreciated by H.R.H. The Duke of Cambridge, the Field-Marshal Commander-in-Chief, who caused it to be recorded that the working of the Military Veterinary School at Aldershot for the year ending March 31st, 1882, was most creditable and satisfactory, and he desired the G.O.C., Aldershot, to highly commend Veterinary Surgeon W. B. Walters.

On August 28th, 1883, Veterinary Surgeon (1st Class) W. B. Walters, was promoted and was succeeded by Veterinary Surgeon 1st Class E. T. Cheeseman, who remained in charge until May 31st, 1887, when he resigned his appointment owing to ill-health. In consequence of the great increase in the work at the School and the necessity for having it carried out thoroughly, two officers, Veterinary Surgeon 1st Class F. Smith‡ and Veterinary Surgeon C. Rutherford, were then appointed, and were designated Professor and Assistant Professor respectively.

In January, 1887, the Army Veterinary Association, originally formed in 1861 by Veterinary Surgeon T. W. Mayer, Royal Engineers, was resuscitated, and many valuable discussions followed the reading of papers, of which the following titles indicate their scope and nature.

"Organisation of the Veterinary Department in the Field." "Veterinary Retrospect of the Afghan War." "Veterinary Service with the South Afghanistan Field Force." "Anthrax in South Africa." "Experiences with the 19th Hussars during the Egyptian Campaign." "Horse Shoeing." "Army Horse Supply." "Transport of Horses by Sea." "Veterinary Experiences in the Armies of France, Germany and Belgium."

Since then many important papers on scientific subjects, as well as on the organisation and administration of the Veterinary Service,

‡ Now Major-General Sir Frederick Smith, K.C.M.G., C.B., formerly Director-General of the Army Veterinary Services, 1907-10.

XUM

have been read and discussed by the members of the Association both to their own advantage as well as to that of the Service generally. It is interesting to record that this Association, one of the oldest in the Kingdom, is still flourishing, and since the end of the Great War has held over 50 meetings.

In 1886 the School expanded and became, as its founder hoped, a seat of scientific research. During Professor Smith's tenure of office, March, 1886, to December, 1892, 49 communications dealing with original work were published by him in scientific and professional periodicals; and in addition he published three text books.

The following summary indicates the range of the publications :—

"The chemical analysis of the hoof of the horse; of the blood in purpura hæmorrhagica; of the urine in healthy and diseased horses."

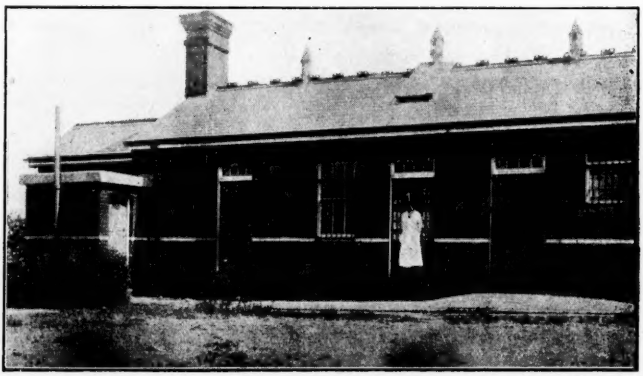

FIG. 4. A View of the Laboratory of the Royal Army Veterinary School.

"The chemical composition of the air from the lungs of horses during rest and work; of the sweat of the horse; of synovia, saliva, blood; of the gases found in pus, sweat and saliva."

"Dieting and the amount of food required during rest and work.'

"A manual of saddles and sore backs, collars and sore shoulders" (official publication).

"Operations on the feet for the relief of certain forms of lameness; experiments on the structure and function of the foot."

"The minute structure of the skin of the horse and elephant."

"The cause of wide and narrow chests in horses."

"Experimental operations for the relief of roaring."

"Observations on the effect of the Lee-Metford bullet on the bones of horses."

"Diseases of the facial sinuses; sprains; diseases of joints; recurrent scabies; fatal diseases of the digestive canal of the horse."

"The ophthalmoscope in veterinary practice."
"The refractive character of the eyes of horses."
"Experimental therapeutics and hypodermic medication."
"A Manual of Veterinary Hygiene" (two editions).
"A Manual of Veterinary Physiology."

The selection of Veterinary Surgeon 1st Class F. Smith to the Professorship of the School was fortunate, as in addition to being an expert and assiduous worker he was a fluent speaker and had the happy gift of imparting his knowledge and enthusiasm to others. The greater part of the research work carried out during his tenure of the appointment was done after the recognised hours of duty and under trying conditions. Requests for improved facilities for research received very little consideration; the chemical work had to be carried out in a disused officers' mess kitchen (Fig. 3), while much laboratory material, as well as the pay of a subordinate to assist in the researches, was paid for privately by Professor Smith. Pathology, hygiene, physiology and chemistry engaged his attention, especially in their application to Army animals, and his contributions to veterinary literature on these subjects benefited the profession at large as well as the Veterinary Service of the Army.

The proposal of Principal Veterinary Surgeon Collins to allow the Professor of the Army Veterinary School to travel on the Continent for a specific purpose took nine years to materialise, but in 1887, Veterinary Surgeons 1st Class F. Duck and F. Smith were permitted, at their own expense, to visit the Veterinary Schools and Military Establishments of France, Germany and Belgium. As a result of their visit conjoined reports were furnished to the P.V.S. of the Forces dealing in one case with purely professional matters, and in the second with military veterinary questions. In the professional report an account was given of the State Vaccine Establishment in the Veterinary School at Brussels, which supplied lymph for the whole of Belgium, and it was suggested that the Army Veterinary School at Aldershot should undertake vaccine production and supply the Army.

It so happened that in 1888 smallpox was very prevalent in the country, and the Local Government Board had so many calls on its calf vaccine resources that it was unable to supply the Army with the amount of lymph required. This was especially felt at large military centres, such as Aldershot, and Veterinary Surgeon 1st Class F. Smith urged the P.M.O. (Brigade Surgeon C. A. Maunsell, A.M.S.) to obtain authority from the Army Medical Department at the War Office for the lymph to be produced at the Army Veterinary School. This proposal, owing to the urgency of the matter, was taken up energetically by the Medical Service, and in due course an Army Vaccine Institute

was created, as an annexe to the Army Veterinary School, by re-appropriating some old brick buildings on the site of the present School. Whilst this was being done Veterinary Surgeon 1st Class F. Smith went through a course of instruction in calf vaccination and lymph collection, at the calf lymph establishment of the Local Government Board. The original stock from which work was begun in May, 1888, was obtained from Belgium. The supply furnished by the Institute was more than equal to the demand, and in 1897 the Navy was included in its operations.

Following the procedure of the Local Government Board, the lymph was at first issued on ivory points, but it was soon evident that this reduced its vitality, especially when sent abroad, and the Belgian system of storing in glycerine was adopted. Meanwhile, every opportunity was taken to place the quality of the lymph above reproach. When operations began the calves were hired but, later, as the value of the work was appreciated by the authorities, permission was granted to buy animals, which were destroyed after the collection of the lymph and a *post-mortem* made to ensure their having been in perfect health. Still later every batch of lymph was submitted to a bacteriological examination before issue.

THE VETERINARY JOURNAL of 1901 (Vol. IV) is responsible for the story of the authorities at the War Office visiting the Institute for the purpose of recommending the employment of glycerinated lymph, only to find it had been employed there for something like 12 years! The glycerination process took three to four weeks to complete and occasionally there was delay in meeting sudden demands; in 1905 the lymph was subjected to the action of chloroform vapour for three hours, which was found to eliminate the extraneous organisms in a satisfactory manner.

For 20 years the work connected with the Army Vaccine Institute cost nothing for the officer staff, but with the growth of the School it was considered advisable to appoint a special officer for the work with a staff salary.

Under the provisions of the Vaccination Act of 1898, and of the Vaccination Order, 1898, of the Local Government Board, numerous changes in connection with vaccination administration amongst civilians were introduced. Parents were relieved of any penalty under the compulsory clauses, provided they satisfied a stipendiary magistrate, or two parties in Petty Sessions, that they conscientiously believed that vaccination would be prejudicial to the health of their children. The result of these modifications in legislation was a great decline in vaccinations amongst civilians, and the Board of Health, which had replaced the Local Government Board, had to look else-

where for a market for their lymph. They therefore approached the War Office, and asked to be allowed to supply the Army at a slightly lower rate than that obtaining; in 1910 their offer was accepted and the Army Vaccine Institute was closed down. During the first year of its existence, lymph for 35,880 persons was prepared and issued, and by 1897 this had increased to 69,524. From 1903 onwards, lymph for over 100,000 persons was issued annually, and up to the date of the closing down of the Institute (March 31st, 1910) lymph for over two million people had been issued.

In 1904 a small portable radiographic outfit was sent to South Africa for trial in the veterinary hospitals. It was not powerful enough to give the degree of penetration necessary for equine patients, and was afterwards sent to the Army Veterinary School at Aldershot, where a further but unsuccessful attempt was made to utilize it on Army animals. In 1909 an up-to-date apparatus was installed, and up to the commencement of the Great War in 1914 this was in constant use for the diagnosis of obscure lameness. During the war considerable advance was made in radiographical science in connection with metals and munitions, and the Veterinary School benefited thereby in 1922 by having its X-ray installation thoroughly overhauled and brought up to date. It is used in the diagnosis of cases which do not respond to ordinary clinical methods, and the skiagrams taken enable either a definite diagnosis of existing lesions to be made or are of value in eliminating suspected lesions.

In 1907 the Assistant Professor (Captain A. G. Todd) spent his leave in making a tour of the veterinary institutions of. Rotterdam, Paris and Brussels, and in 1908 the same officer was sent officially to the State Serum Institute in Holland to study the preparation of an anti-strangles serum. From 1908 to 1910 this was produced at the School, extensive observations being subsequently made in military stations on its value as a preventive of this disease. The system of purchase of remounts in the United Kingdom, presented considerable difficulties with regard to the inoculation with serum before infection, but sufficient data was obtained to show that although the serum failed to produce immunity, it modified the severity of the disease and was also of value in treating its acute forms. The production of the serum was continued up to August, 1914, and was commenced again in 1922 (Fig. 4).

Experiments were also made with radium for the treatment of foot lameness and tumours, and with cataphoresis for the treatment of joint affections, but the results did not justify the continuance of the experiments. Williams' operation for the relief of roaring, as modified by Major F. Hobday, C.M.G., F.R.C.V.S., was frequently demonstrated to officers of the Corps.

XUM

At various times during the history of the School the instructors have been called upon to hold special classes for the benefit of officers, N.C.O's and men. Saddle galls and sore backs used to be an everyday occurrence in mounted units, and on service an excessive number of casualties were attributable to this cause. This subject was carefully studied by Professor F. Smith and before the Cavalry Manœuvres in 1891 special classes were formed for the instruction of 100 cavalry officers and 35 saddlers in saddle galls and sore backs. These lectures, the value of which was enhanced by having demonstrations of typical sore backs after manœuvres, were much appreciated by and of great benefit to those attending them. Officers of the Mounted Infantry were afterwards instructed in the same subject, and similar special

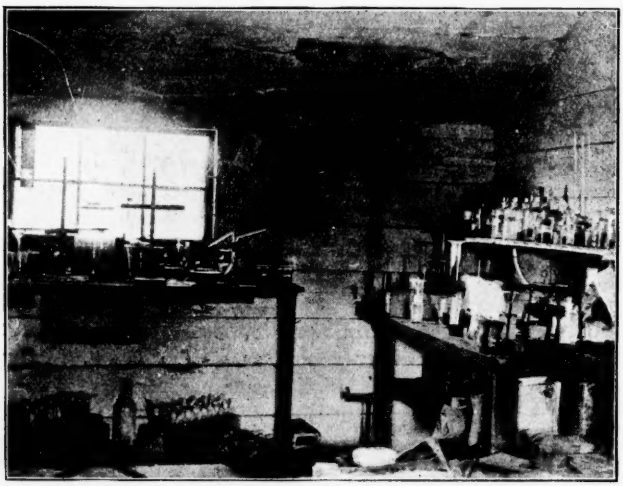

FIG. 3. View of the Laboratory of the old Army Veterinary School.

classes were held from time to time, with the result that sore backs in the Army have been almost entirely eliminated in peace, and have been reduced practically to a minimum on active service.

From 1891 to 1904 (in which year the Mounted Infantry School was formed at Longmoor, to which a veterinary instructor was attached), officers of the Mounted Infantry and Infantry Transport frequently received special instruction in animal management at the Army Veterinary School, and at times units embarking for overseas received lectures on the embarkation of horses and on their care during sea voyages.

In 1906, when the Cavalry School was formed at Netheravon,

an officer, R.A.V.C., was appointed to the staff to give lectures on animal management to Cavalry officers and N.C.O's. This subsequently became the School of Equitation for officers and N.C.O's of the Cavalry and Royal Artillery, and on its transfer to Weedon the same system of instruction prevailed.

From 1881 to 1924 approximately 2,000 officers and 3,000 N.C.O's and men attended the regular classes in animal management at the Aldershot School. The high standard of horsemastership, for which the British Army is deservedly renowned, is in no small measure due to the scientific principles, and their practical application to the welfare of animals, taught to all who have passed through the School. The syllabus, with several additions and modifications, the results of lessons learnt during war, is practically the same as the original; it has served as a model for other institutions formed at later periods, and during the Great War for innumerable courses of instruction for officers, N.C.O's and men of all mounted branches of the service, held in veterinary hospitals in the Field. In the B.E.F. alone 850 officers and 4,000 N.C.O's of combatant branches of the service attended lectures in those institutions, and large numbers received similar lectures at the schools of instruction in the other theatres of war.

Officers on Probation.

Reference has already been made to the fact that when the Army Veterinary School at Aldershot was created, it was decided to inaugurate special classes at the School for junior veterinary officers during their period of probation, a course of lectures being given on Army Veterinary Hygiene and on the tropical diseases of all animals used in the service in various parts of the world in which the British Army was stationed. These were continued up to the South African war, when all civil veterinary surgeons employed were sent to the School for a course of instruction before proceeding on service. Up to this time no definite period of instruction was laid down for officers on probation; they were attached to various units for instruction in riding and drill, for practical instruction in veterinary duties, and they attended the School until the lectures were completed. This method was found to be unsatisfactory, and in 1904 an amended syllabus of instruction was drawn up, and officers on probation were ordered to attend the School for a period of six weeks. In 1908 the course was again revised and extended to three months and an examination in the subjects taught was included. The benefit derived from this instruction was brought to notice during the Great War, when junior officers were called upon to undertake duties involving considerable responsibility, which were on the whole most satisfactorily carried out.

The officers, A.V.C., of the Territorial Army laboured under a disadvantage in comparison with those of the Regular A.V.C., in that there were no facilities for an initial course of instruction in veterinary duties. Prior to 1907 it was the custom to attach these officers to a regular unit under a veterinary officer, but this was not always convenient and the results were unsatisfactory. The Director-General of the Army Veterinary Service, Major-General Sir F. Smith, K.C.M.G., C.B., took up the question and obtained permission to hold classes for 12 working days' duration for these officers at the Army Veterinary School. In 1909 a Special Reserve of Officers, A.V.C., was formed for whom an annual course of instruction of six weeks' duration was provided, similar to that arranged for probationary officers.

FIG. 2. View of the present Royal Army Veterinary School.

On the outbreak of the War in August, 1914, the Army Veterinary School, in common with all other Army schools, was closed, but in 1915 Captain Minett, M.B.E., A.V.C., was instructed, for economic reasons, to take over the laboratory and commence the production of mallein, which resulted in the saving of many thousands of pounds to the State (Fig. 5). In addition to the production of mallein, Captain Minett undertook pathological research amongst animals of reserve formations in the United Kingdom.

During this period investigations were also conducted in various Commands in the United Kingdom, into influenza, pneumonia, parasitic diseases, and the feeding and well-being of military animals, and in 1918, on the recommendation of the Director-General, Major-

General Sir L. Blenkinsop, K.C.B., D.S.O., the Army Council agreed to the whole of this work being concentrated at the Army Veterinary School under the name of the Central Veterinary Research Institute. The Royal Society for the Prevention of Cruelty to Animals made a gift of the plant and materials required to complete the Institute, and from 1918 to 1921 the following officers were employed at various times in research work :—

Lt.-Colonel W. H. Watkins-Pitchford, C.M.G., Commandant ; Major T. C. Evans, Canadian A.V.C. ; Captain R. H. Knowles, R.A.V.C. ; Captain R. Daubney, R.A.V.C. ; Lieutenant R. G. Linton, R.A.V.C. ; Lieutenant Linzell, R.A.V.C.

In 1921 the Institute reverted from its war time scope to its pre-war status, that of a Veterinary School. The functions of the Research Institute were not abandoned entirely, and although the re-establishment of peace conditions tended to restrict the time devoted to research, a considerable amount of useful work has been carried out. This includes reports and opinions on the nature of morbid tissues and fluids, the examination of the values of forage, and the preparation of sera and vaccines for diseased conditions.

In civil life post-graduate courses for members of the profession had been instituted at veterinary colleges, which were attended by selected officers of the A.V.C., especially those who had recently returned from abroad, who were thus made acquainted with advances in science. This course of instruction also included details of municipal work which were ordinarily outside the duties of a military veterinary surgeon. It was considered that a more suitable course could be arranged at the Army Veterinary School, Aldershot, to include instruction in organisation and administration, as well as in epizootic and tropical diseases, and in 1920 the Director-General obtained the sanction of the Army Council to hold two such classes annually.

In 1906 the instructional work occupied 750 hours, and in 1922, through the addition of courses for officers of the Territorial and Militia Forces and the senior regular officers of the R.A.V.C., the time occupied was increased to 1,685 hours.

In the year 1919 the School of Farriery was placed under the administration of the Veterinary School ; this large increase of work and responsibility necessitated an addition to the staff and a Lt.-Colonel was included in the establishment which was as follows :—

1 Commandant.	Lt.-Colonel.
1 Assistant-Commandant and Instructor.	Major.
1 Assistant-Instructor and Bacteriologist.	Captain.

Subordinate staff : 1 Sergeant ; 7 Civilians.

The programme of the Courses of Instruction given at the Royal Army Veterinary School each year is as follows:—

1. Classes for Combatant Officers of the Regular Army, Militia and Territorial Army in animal management and veterinary hygiene. Two classes a year, each of four weeks' duration.
2. Classes for N.C.O's of the Regular Army, Militia and Territorial Army in animal management and veterinary hygiene. Two classes a year, each of six weeks' duration.
3. Classes for Officers, R.A.V.C. (on probation) in preventive veterinary medicine, animal hygiene including animal nutrition and tropical diseases of animals. Duration: Three months.
4. Classes for Regular Officers, R.A.V.C., on return from a tour of foreign service. For Captains and Majors two classes a year, each of three months' duration.

FIG. 5. View of the Laboratory.

5. Classes for Officers, R.A.V.C., Militia. Duration: One month.
6. Classes for Officers, R.A.V.C., T.A. Two classes a year, each of 12 working days' duration.

In 1925 the War Office approved a grant of £40 a year for the provision of slow motion pictures to illustrate cases of lameness and items of interest in animal management. Several interesting pictures have already been taken and in time, it is hoped, the School will have a unique collection which will add to the value of the instruction given.

The following tables show the names of the various members of the staff of the School from its creation to the present day.

MEMBERS OF STAFF OF THE ROYAL ARMY VETERINARY SCHOOL.

1st June, 1880, to 11th March, 1881...	Veterinary Surgeon (1st Class) J. D. Lambert ...	Officer in charge.
12th March, 1881, to 28th August, 1883	Veterinary Surgeon (1st Class) W. B. Walters ...	Officer in charge.
29th August, 1883, to 31st May, 1887	Veterinary Surgeon (1st Class) E. T. Cheeseman	Officer in charge.
1st June, 1887, to 30th November, 1892	Veterinary Captain F. Smith	Professor.
1st December, 1892, to 30th November, 1897 ...	Veterinary Major S. Longhurst	Professor.
1st December, 1897, to 20th August, 1902 ...	Veterinary Major R. Moore	Professor.
21st August, 1902, to 14th February, 1905 ...	Major E. R. C. Butler	Professor.
15th February, 1905, to 14th February, 1909 ...	Major E. Taylor	Professor.
15th February, 1909, to 15th November, 1912 ...	Major A. C. Newson	Professor.
16th November, 1912, to 31st March, 1914 ...	Major A. G. Todd	Commandant.
1st April, 1914, to 4th August, 1914...	Major E. E. Martin...	Commandant.
7th June, 1918, to 31st December, 1922	Lt.-Colonel H. Watkins-Pitchford, C.M.G. ...	Commandant.
1st April, 1923, to 27th February, 1924	Lt.-Colonel A. J. Williams, D.S.O.	Commandant.
28th February, 1924, to 30th November, 1925 ...	Brevet Colonel A. G. Todd, C.B.E., D.S.O. ...	Commandant.
1st December, 1925	Lt.-Colonel J. J. Aitken, C.M.G., D.S.O., O.B.E.	Commandant.
1st June, 1887, to 31st May, 1892	Veterinary Captain C. Rutherford	Assistant Professor.
1st June, 1892, to 31st May, 1897	Veterinary Captain E. R. C. Butler	Assistant Professor.
1st June, 1897, to 11th September, 1902	Veterinary Captain J. A. Meredith	Assistant Professor.
12th September, 1902, to 21st July, 1906	Captain E. E. Martin	Assistant Professor.
22nd July, 1906, to 21st July, 1910	Captain A. G. Todd	Assistant Professor.
22nd July, 1910, to 21st July, 1914	Captain E. J. Wadley	Instructor.
21st July, 1914, to 4th August, 1914	Captain K. McL. McKenzie	Instructor.
15th November, 1920, to 30th September, 1923 ...	Brevet Lt.-Colonel H. S. Mosley, D.S.O.... ...	Asst. Commandant and Instructor.
1st October, 1923	Major J. J. M. Soutar, O.B.E.	Asst. Commandant and Instructor.

CENTRAL RESEARCH INSTITUTE.

1st July, 1919, to 2nd March, 1920	Captain R. H. Knowles	Ophthalmology.
15th March, 1919, to 29th May, 1919	Captain R. Daubney	General.
21st August, 1918, to 14th August, 1919 ..	Lieutenant Linzell	Chemistry.
15th July, 1918, to 24th January, 1919	Lieutenant R. G. Linton	Dietetics.

VACCINE PRODUCTION.

1st April, 1908, to 31st March, 1910	Captain H. Greenfield	——

MALLEIN PRODUCTION AND BACTERIOLOGY.

15th April, 1915, to 31st August, 1921	Captain F. C. Minett, M.B.E.	——

INSTRUCTOR AND MALLEIN PRODUCTION.

4th July, 1921, to 7th October, 1924	Captain C. J. R. Lawrence, O.B.E.	——
8th October, 1924	Captain C. Davenport, O.B.E.	——

A REVIEW OF THE ARMY VETERINARY SERVICE.

By Major-General Sir JOHN MOORE, K.C.M.G., C.B., F.R.C.V.S.

Perhaps in no part of the Army in recent years has greater progress in organisation and efficiency been shown than in its Veterinary Service. After an active association with it for thirty-two years, I can bear full testimony to this. In the year 1889, when I was appointed to a commission, it was termed "Army Veterinary Department," and officers were gazetted as Veterinary Surgeons, ranking as Veterinary Lieutenants. The Department was simply a number of officers attached to regiments or units (at least on Home Service) for executive duty, with Inspecting Veterinary Surgeons at certain chief military stations for duty as the rank indicates and for administrative purposes. Treatment was on a regimental or unit basis, the necessary personnel for the subordinate care of the sick animals, grooming, etc., being drawn from the unit concerned, a system which, though suited to the easy times of peace, was ill adapted to the more serious and difficult times of war. It was through war, and the lessons learned from active service in the field, that changes were introduced and systems were improved, until at last there was evolved a perfect and completely self-contained corps organisation which has been proved equal to any emergency of war service, and is now acknowledged as a pattern of efficiency. One cannot but feel proud to have been associated with those innovations and developments which led to the success of the Army Veterinary Corps, and which gained for it the distinction of Royal favour during the greatest war the world has ever known. And yet in looking back over one's past service and career, there was something attractive about the old regimental system. It had many good points, particularly from the personal point of view. Attachment to a regiment meant the formation of many friendships which have stood the test of time; close association of Regimental and Veterinary Officer created a spirit of faithfulness and appreciation on both sides which altogether has been to the advantage of veterinary service and, indeed, to the Army as a whole. Many a veterinary officer owes his success in life as a man and a sportsman to his period of service with a good cavalry regiment, for there is no better school for moulding character and for developing the best of human traits and aspirations. However, when war tests efficiency, and that efficiency is measured in pounds, shillings and pence, changes must ensue. So appalling was animal wastage during the war in South Africa, 1899-1902 (347,007 horses and 53,339 mules and donkeys being expended out of 518,794 horses and 150,781 mules and donkeys provided), that serious enquiry into veterinary departmental conditions of the Army was instituted with the result that

in 1903 an Army Veterinary Corps of N.C.O.'s and men was formed at home and subsequently organised into veterinary sections for allocation to station veterinary hospitals. Similar procedure was adopted in the commands of South Africa and Egypt. A good beginning under corps organisation was thus made, and as years went by, improvements, particularly in relation to mobilization were effected. Curiously enough, India was considerably ahead of Home Service in veterinary organisation and arrangements in those days. That country had adopted a Station Veterinary Hospital system in the year 1884, and having had the experience of frontier warfare, its field system of veterinary service was well in advance of anything conceived at Home. Consequently, when hostilities broke out in South Africa, Indian troops were accompanied by field veterinary hospitals which rendered good service and formed copy for field veterinary hospital procedure generally during the campaign. Indian veterinary arrangements, however, were far from perfect ; indeed they were a curious mixture of systems and elements. Station veterinary hospitals, and British veterinary officers detailed to India on a tour of foreign service for five years, were essentially for British troops. Each hospital had a British N.C.O. of the Unattached List belonging to what was termed " Indian Subordinate Veterinary Department." An Indian clerk was also maintained, but all other personnel was borrowed from units. The veterinary care and treatment of animals of Indian Cavalry and Transport was carried out under regimental and unit arrangement by salutries or veterinary assistants, and the services of British veterinary officers were only called in on the occasion of an outbreak or apprehended outbreak of contagious disease. On field service all units came under the one control of British Veterinary Service, treatment being carried out in the field veterinary hospitals or sections specially mobilized for the purpose. The borrowing of personnel and the evil principle of counting men effective in two places for two separate purposes, however, existed. An improvement was made in 1918, when the veterinary assistants of Indian Cavalry and Transport were incorporated into an Indian Veterinary Corps, but it was not until 1920 that a self-contained corps, complete in every detail with its own personnel, and for all purposes in peace and war, was established under the title of " Army Veterinary Corps, India." In effect this corps is the counterpart of the R.A.V.C. of the Home Army. The Indian material is well adapted for a highly successful corps, and it is not too much to say that well handled and carefully trained it will prove its efficiency as surely as its sponsor, the R.A.V.C., did during the Great War.

The success of Army Veterinary Service in the Field not only

lies in the closeness and the strictness of the supervision of units, and the disposition and quality of its veterinary hospitals on lines of communications, but in the link between these two factors, viz., its evacuating arrangements. It is the most difficult feature of field veterinary service, yet it is extremely important that the clearing of ineffectives should be carefully considered and carried out. The histories of wastage of animals in war clearly point to this as the weak spot in veterinary field organisation. I feel sure that if definitely organised arrangements for relieving units of their ineffective animals had existed in the South African war, the wastage would have been much less. The same applies to Indian frontier campaigns. The old system of sending ineffectives to the second line transport, moving them along with it until an opportunity occurred for evacuation, was of no practical good, and not in the interests of the sick animals. The abolition of second line transport, however, forced veterinary service to consider some expedient, and Mobile Veterinary Sections were instituted. I think I should be right in saying that every person associated with mounted troops during the late war, and in every theatre of it, would subscribe to the great work Mobile Veterinary Sections attached to divisions and cavalry brigades achieved. Their initial career in the Expeditionary Force, France, was very interesting. Though they were specifically by number allotted to divisions and cavalry brigades on mobilization, and proceeded to France with their respective formations, under War Office ruling they were normally to be located at the railheads of the formations concerned, and moved under the orders of the Inspector General Communications when requested by formations, a position and arrangement with which I never agreed, and which very quickly fell to the ground. Directors being attached to the headquarters of the I.G.C. (an entirely wrong position which also became an abandoned policy), it fell to me as Director of Veterinary Services of the Force to issue instructions regarding their movement. This sounds very simple, and no doubt would have been simple enough in practice if railheads had maintained a reasonable period of fixity, but when they were changed twice a day or more under a retreat the position was hopeless. There was nothing for it but to definitely hand them over to the formations to which they had been allotted, to be a part of their organisation, and controlled by them. This was effected with difficulty, the D.D.V.S. at General Headquarters (Colonel, now Major-General, E. R. C. Butler) having personally to conduct them to formations. He was unable to place them quite according to their original allotment, but this immaterial point in no way disturbed the great and absolutely indispensable role they played during the war. With the growth of

a force, and the organisation of whole divisions and extra troops into corps, further veterinary organisation at the front becomes necessary. At first in France this was met by detailing men from each mobile veterinary section of divisions in the corps to form what was termed a " Corps Mobile Detachment," but as divisions were constantly moved from one corps to another, and the veterinary personnel thereby subject to change, it was decided to create self-contained units with corps termed " Veterinary Evacuating Stations " by permanent allocation of personnel from mobile veterinary sections and lines of communication veterinary hospitals. This was done, the mobile veterinary sections delivering their ineffectives to the veterinary evacuating stations, who cleared them in addition to others from corps and army troops to the veterinary hospitals, an arrangement which proved very satisfactory. Even special sick horse trains became more or less general. When one looks back on veterinary organisation during the Great War, it is astonishing how easily and smoothly everything fitted in. So automatic had veterinary service become that it appeared to run itself. Few would credit the fact that on an average 3,500 animals were evacuated weekly to reception veterinary hospitals, the highest number in any given week being 4,512. It was effected without fuss or trouble, and under the simplest procedure. The quality of the large veterinary hospitals, and convalescent horse depots, made successful through the individual ability of their officers, N.C.O.'s and men, stands out for all time as pattern of good order, discipline and efficiency. In a short article such as this I would not attempt to describe what was achieved by these institutions. They were complete, and provided every means for the most skilful treatment and comfort of animals in the trying circumstances of war. It is a triumph too to be told, as I was privately, by the Adjutant-General on the conclusion of hostilities in France and Flanders, that he regarded our veterinary units as examples of good command and discipline. And the merit and strength of a fitting organisation was even more prominently shown when demobilization became the order of the day and the unwinding and clearing up process began. Veterinary units of the field army and lines of communication in the B.E.F. France were constituted disposal centres, and some idea of the nature of this important service may be gathered from the records of sale which showed that approximately 190 million francs were realised for sale of workable horses in France and Belgium, £1,313,000 sterling for purposes of food, and £55,000 for by-products.

In all theatres of the Great War veterinary service was modelled on similar lines, differences and distinctions resting chiefly with terrain and the class of animals to be dealt with. It would be invidious

to single out any particular theatre as superior to another, at the same time it was expected of the original and premier Expeditionary Force to prove the required organisation and to furnish copy for the adoption of others. Collectively, all have reason to be satisfied with their achievements and in which it goes without saying that the veterinary services of our dominions rank in equal place. After the experiences of four and a half years of continuous service in the field there is little left to the imagination whereby the efficiency of the animals of a field army can be best maintained and disease controlled.

THE TERRITORIAL VETERINARY SERVICE: PAST AND PRESENT.

By Lt.-Colonel P. J. SIMPSON, D.S.O., T.D., F.R.C.V.S., *D.A.D.V.S., South Midland Division Territorial Army.*

Prior to 1910 the Territorial Veterinary Officer was a regimental officer on the strength of a Yeomanry regiment, wearing the uniform of the regiment to which he belonged and holding the rank of veterinary lieutenant, veterinary captain, etc.

He was associated in all respects with the other officers of the unit, and was eligible to join in all regimental sports and, incidentally, to subscribe to all regimental funds. In many cases he was keen enough to turn out regularly for drills with the unit and often enough led a troop. During the training season, apart from camp, he often attended drills at the local stations and gave lectures on first-aid treatment and stable management to the officers, N.C.O's and men. He took a keen pride in the horsemastership of his regiment and was consulted in and out of the training by the commanding officer with regard to matters appertaining to the welfare, etc., of the horses. It must be remembered that in those days the personnel of a territorial unit differed very considerably from the present time, *esprit de corps* was very high, and the traditions of the regiment were very jealously guarded.

The officers were practically all hard riding, hunting men (M.F.H's, etc.), and were drawn from the leading county families. The other ranks were of a class considerably higher than those found to-day. It was not at all uncommon for the veterinary officer to find that his regimental farrier sergeant was a wealthy stockbroker, farmer, or horse dealer. In some cases M.R.C.V.S.'s held the rank of farrier sergeant, when there was no veterinary officer. All this made the annual training a very enjoyable affair, but it must be confessed that it did not lead to efficiency of the veterinary officer from a military point of view. The veterinary officer found himself as it were completely on his own and, although thoroughly devoting himself to his

veterinary duties, he was left totally unacquainted with veterinary military routine, he was probably unaware under whose immediate command he was regarding veterinary administration. Matters improved in this respect when the R.A.V.C. Territorial Force came into existence. Compulsory attendance at the course of lectures at the Army Veterinary School, Aldershot; the necessary passing of examination for promotion, with the formation of territorial mobile sections caused the veterinary officer to take his duties more seriously. This was a good start, and then the Great War broke out. During that time the territorial veterinary officer may be said to have proved himself worthy of the many big tasks imposed upon him, and with practically no previous training he suddenly found himself commanding mobile sections, hospitals, evacuating stations and even acting as D.A.D.V.S. of a division, or A.D.V.S. of a corps. Not only were these duties carried out successfully, but in some cases with great distinction.

Immediately after the war the R.A.V.C. (T.A.) personnel was greatly increased and all divisions were allotted veterinary hospitals, mobile sections, and evacuating stations, but the need for economy soon caused the disbandment of nearly all the hospitals and evacuating stations, so that there now only remains a total of two territorial veterinary hospitals, with a mobile section to each division. Of late the Supplementary Reserve has been formed and these come, for training purposes, under the command of the officer commanding the mobile section. The D.A.D.V.S. of all territorial divisions is now a territorial officer responsible for all veterinary arrangements of the division to the D.D.V.S. of the command in which the division is situated. Undoubtedly, the Territorial Veterinary Service may now be classed as highly efficient, and although somewhat more is expected from the officers and men than used to be the case, yet the work is interesting and congenial and the annual camp still makes a very pleasant break in the monotony of daily practice.

Unfortunately, except in one or two divisional areas there does not seem much keenness among the more junior members of the profession to come forward and take commissions in the Territorial R.A.V.C.

This is a pity, as the veterinary officer is still indispensable and, as in all other professional appointments, the best men are wanted in order that the duties may be carried out in the most up-to-date manner. In fact, a territorial veterinary officer can be, and should be, a man who can prove to the general public the fact that the veterinary profession can provide not only skilled veterinarians, but men capable of command and with administrative ability.

SOME NOTES ON VETERINARY HOSPITALS IN FRANCE DURING THE LATE WAR.

By Major H. E. GIBBS, D.S.O.
Royal Army Veterinary Corps.

Functions.—The functions of veterinary hospitals are the treatment and disposal of the more serious cases of sickness and inefficiency from the fighting line which reach them through the medium of mobile veterinary sections and veterinary evacuation stations; and sick and injured from units on the lines of communication.

Location.—They are lines of communication units and their location is regulated by military expediency and depends on facilities for rail, supply and transport services. There was, therefore, in some instances restricted choice as to actual siting, and those were fortunate hospitals which stood on gravel subsoil and were adjacent to permanent roads. Those who served in hospitals not so sited will remember the time and labour spent on the making and upkeep of roads by A.V.C. personnel which might have otherwise been employed in the care of sick animals.

Grouping.—Where conditions permitted, hospitals were grouped as follows:—

(*a*) Reception Hospital.
(*b*) Mange Hospital.
(*c*) General Hospital (one or more).

Construction.—Hospitals varied both as regards the materials used in their construction and in their lay-out. Some were built of corrugated iron, some of wood, some were tented, and wherever possible full use was made of any available and adjacent permanent buildings. The capital cost of the buildings of the veterinary hospitals in France was met to a great extent by the generosity of the subscribers to the Royal Society for the Prevention of Cruelty to Animals.

The work of constructing these hospitals in the theatres of war was, in great part, undertaken by the personnel of the A.V.C.

The Working of Veterinary Hospitals.—The final establishment comprised one commanding officer (a lieut.-colonel), one second-in-command (a major), four captains or lieutenants, each of which was in charge of two subdivisions, and one quartermaster and adjutant; a total of seven officers, two warrant officers and 631 other ranks.

Decentralization was the order of the day, and the personnel was split up into a headquarters and eight subdivisions, each capable of dealing with 250 sick animals. Every effort was made to maintain these as self-contained units.

The officer in charge was responsible to the C.O. of the hospital for the discipline, training and employment of his men, as well as for

the interior economy, pay, clothing, messing and quarters in his charge. All questions relating to these matters were referred to him for investigation before they were dealt with by the C.O., and similar procedure was adopted in dealing with all complaints and requests of the men. Further, they were responsible for the care, feeding, treatment, and general management of all animals in their subdivisions; also for all stores and equipment and for maintenance and sanitation of stables. Every effort was made to avoid transferring men from one subdivision to another, and to further encourage *esprit de corps* and stimulate a healthy rivalry, some hospitals instituted inter subdivisional competitions of various sorts, and prizes were awarded periodically to the winners, i.e., best kept huts, best kept animals, largest number of animals cured, etc. In furtherance of this, subdivisional organisation, where possible stabling was arranged in eight blocks, each to accommodate 250 patients and complete with forge, dressing shed, expense forage store, pharmacy, office, etc.

Each such block of buildings was run by a subdivision of the personnel.

The principle of grouping together cases of a similar type was practised in all hospitals, i.e., all cases of lameness together, respiratory diseases also, and so on.

The disposition of patients in a reception hospital differed somewhat from other hospitals. The chief function of the former was to act as a sorting agency, and in a lesser degree to treat cases too serious to move, and those likely to be fit for duty in a very short time. In pursuance of its chief function (sorting) all patients from the front were received in quarantine, malleined, subjected to careful inspection and sorting, and those likely to become again fit for duty were dispatched to other hospitals according to the nature of their diseases.

A treatment card was made out for each animal, on which were entered particulars of description, unit, date of admission, disease, etc. This card accompanied the animal throughout its sojourn with the veterinary service, all details of treatment and interest concerning it being entered thereon, and it was finally filed by the discharging unit.

This card was of inestimable use and gave a concise view of each animal's history, progress or otherwise, and so simplified their further disposal. Tracing of animals was also simplified by this means. All animals unlikely to be of further use were disposed of either by sale to local butchers, railed to contractors in large towns for butchery, or disposed of by carcase economiser detachments.

On arrival at a hospital other than a reception, each animal was

compared with the particulars entered on its treatment card, given a hospital number (stamped on tin plate and fastened on to buckle of head collar) and posted to its appropriate subdivision.

Here its feet were attended to (this was invariably much needed), re-branded with broad arrow, if necessary, and the required treatment carried out.

When convalescent it was prepared for discharge either in its own subdivision or transferred to another kept solely for this purpose, according to routine of hospital concerned.

It was finally discharged to remounts either for re-issue to the front, or for duty on the L. of C., or transferred to a convalescent horse depot to complete its cure prior to return to remounts.

During its sojourn in hospital any animal whose further treatment was not considered economical was disposed of in either of the following ways :—

1. By the commanding officer—
   (*a*) Destroyed and buried. Later dealt with by carcase economiser detachments.
   (*b*) Destroyed for butchery purposes.
2. By the deputy director of veterinary services of areas—
   (*a*) Cast and sold to farmers for agricultural purposes.
   (*b*) Cast and sold for butchery purposes.

All butchery cases were destroyed in the presence of a representative of the A.V.C.

Every effort was made to curtail, as far as possible consistent with efficiency, an animal's stay in hospital, and all " old cases " (i.e., over six weeks under treatment) were paraded weekly for inspection by commanding officer.

WATERING was carried out thrice daily, and in most cases by means of a piped supply laid on to troughs of a permanent nature.

FORAGE.—The same amounts of forage were allowed as for animals in the front line. This permitted liberal feeding for debility cases. Animals were fed four times daily, and the forage was distributed to subdivisions by casts and decauville railway.

Equivalents in the form of maize, bran, linseed and linseed cake in lieu of oats and locust beans, green forage and roots in lieu of part of hay ration, were available from time to time.

Each hospital was eventually provided with a motor-driven corn crusher and chaff cutter, and about half the oats and hay ration were thereby enabled to be crushed and chaffed respectively.

In those hospitals provided with dipping baths, steam was led from the bath boiler into special tanks in which hot feeds could be prepared.

In other hospitals Soyer's stoves were used for this purpose.

EXERCISE was carried out either by exercising tracks or by a special method of attachment to ropes; in the latter instance three men could exercise 20 horses on one rope at a time.

In order to regulate the pace to the best advantage of all concerned, only animals of the same class were exercised together, either in track or by rope.

GROOMING.—Each animal was provided with its own grooming kit, which was hung up behind its stall.

Each groom had a small bucket of disinfectant for disinfecting the grooming kit. Owing to various necessary fatigues, etc., grooms invariably had more than the rightful five animals to groom.

CLIPPING was done by power clippers; in some cases driven by electricity, and carried out either under subdivisional arrangements, or in a central spot for the whole hospital. Careful records of all clipping were kept and in addition entered on the treatment cards.

SHOEING was carried out under similar arrangements to clipping, and records were kept on the same lines.

Dressing was carried out under subdivisional arrangements and reached a high standard of efficiency. By means of disinfecting baths heated by charcoal braziers instruments were sterilized after use on each patient. Fresh swabs were used also for each patient and thus the chance of conveying infection from one horse to another was practically eliminated.

The OPERATING THEATRE was in charge of a N.C.O. and party of trained dressers, and was allotted to subdivisions as required.

THE BATH (animal dips) was in charge of a N.C.O. and three permanent men, who were responsible for its care and preparation. When actual dipping took place this staff was assisted by men from the subdivisional grooming staffs.

The materials used were calcium sulphide and Cooper's dip.

The life of each dip (liquid) depended on the facility with which it was kept clean, and this was always a problem.

DISINFECTION of stables and fittings, harness, saddlery, grooming kit, etc., was practically continuous, and the blow-lamp was the sheet anchor for the stables and fittings. The "Thresh" Disinfector was utilized for rugs, and was allotted to subdivisions in turn.

SANITATION.—The greatest attention was paid to sanitation and as a result the veterinary hospitals were amongst the healthiest units in France. The sanitation of the men's camp was carried out by a sanitary squad and all refuse was disposed of in incinerators which were constantly at work. All manure was promptly removed from the

horse lines, and these combined measures kept the fly nuisance under control.

SALVAGE.—Every attempt was made to avoid wastage in every shape or form, and anything which could be utilized again was salved. All empty ration tins were heated in special incinerators, the solder collected and the residue sold.

All superfluous fat from the cookhouse was collected, rendered down and handed over to the Messing and Economy Branch at a fixed price. Other kitchen refuse was sold to pig keepers. Money so obtained was used to supplement the men's messing.

Hair from the manes and tails of horses was also sold, and the receipts credited to Government. Most of the work connected with the sale of horseflesh for human food, the disposal of animal by-products, and the supply of horse-flesh as a ration for prisoners of war, was done by the personnel of veterinary hospitals. The financial results of these enterprises went far to discount the total cost of the veterinary services in France.

DISCHARGES FROM HOSPITAL.—All cured animals were periodically discharged to remounts. They were malleined and finally passed by the C.O. at time of discharge. Those serviceably sound, but not suitable for the front, were branded with a V on the near hind hoof, and such were issued by remounts for duty with units of the L. of C.

INTERIOR ECONOMY AND ACCOUNTS.—As the war was prolonged there was a steadily continuous and gradual approximation to peace methods in many ways.

Every animal, and latterly every pound of forage and rations, every article of equipment, clothing, etc., had to be accounted for; and these factors, together with the pay accounts of the personnel and rendition of numerous technical and other returns involved a vast amount of clerical labour.

TRANSPORT comprised a three-ton motor lorry, general service and other wagons, horse-ambulances, two-wheeled carts for removal of manure.

Dacauville railway was also used for distribution of forage to sub-divisions, and for removal of manure therefrom.

PERSONNEL were accommodated firstly in tents, and latterly in huts of various types. Dining and recreation rooms and canteens were provided for indoor relaxation and outdoor games were encouraged.

Some hospitals had concert parties and some rose to a band.

Baths, hot, cold and shower were provided, and their regular use encouraged.

Rations were good and plentiful, and even when the field ration

was reduced, with ordinary careful management, there was enough and to spare. All hospitals grew their own vegetables and some grew green forage for their animals. Everything possible was done to make the personnel happy and contented, and to this factor was largely due the success of the veterinary hospitals.

Before concluding one would, as a hospital commander, like to take this opportunity of placing on record one's appreciation of the splendid work and loyalty of those officers who laboured so indefatigably and conscientiously to assist in making these hospitals a success, a sentiment which I am sure every hospital commander will heartily endorse.

THE TERRITORIAL VETERINARY SERVICE.

By Major P. W. DAYER SMITH, O.B.E., T.D.,
D.A.D.V.S., 47th (2nd London) Division, T.A.

The honour and pleasure of holding His Majesty's Commission is apparent to all, the existing facilities for obtaining such and its advantages are not so apparent or widely known as they should be amongst veterinary students and the qualified members of our profession.

It is admitted by all that training and discipline is an asset for a successful career. Let us see how this training and discipline can be obtained throughout the whole period of our studies; before, and after, we finally qualify as M.R.C.V.S.

At the Public School a boy may become a member of the Junior Division, Officers Training Corps, where he is initiated, and comes under the real influence of strict discipline, coupled with a healthy camp training.

At the University he may join the Senior Division of the Officers Training Corps. An excellent contingent exists at the Royal (Dick) Veterinary College, Edinburgh, known as the Royal (Dick) Veterinary College Contingent, Officers Training Corps, and it is regretted that the other veterinary schools have not followed this splendid example. It is hoped they will do so in the near future.

The contingent is commanded by a professor of the college and is officered and non-commissioned officered by the students.

The object of the contingent is to provide students with certain elementary military training with a view to their eventually applying for a Commission in the Regular and Territorial Army. The training is of the usual military character with particular reference to the executive and administrative duties of the Royal Army Veterinary Corps. Examinations are held for Certificates "A" and "B," the

possession of which is of great advantage when applying for a Commission.

It will be gathered from the foregoing that considerable facilities exist for training long before one is qualified. After this very important event one can then continue in the Territorial Army, "Royal Army Veterinary Corps."

Just previous to the outbreak of the Great War the Territorial Army Veterinary Corps was going through the process of metamorphosis. The Yeomanry and Artillery Brigades had their own veterinary officers and at that period the formation of mobile veterinary sections was just commencing. Upon war breaking out, the Corps had to be considerably expanded, and each division was supplied with a mobile veterinary section. Later on territorial veterinary hospitals and veterinary evacuating stations were formed, thus the same care was able to be given to veterinary casualties, whilst being passed back from the front, as was given to the casualties dealt with by the Royal Army Medical Corps; the formations being built up on similar lines.

At the termination of the war all these units were demobilized. In 1920 the Territorial Royal Army Veterinary Corps was reorganised, and we now have 14 mobile veterinary sections—one to each territorial division—two veterinary hospitals and two veterinary evacuating stations situated in various parts of England, Scotland, and Wales, in which one can serve after being appointed to a commission.

There is also a veterinary officer attached to each Yeomanry Regiment and Artillery Brigade. These units are situated in all parts of the country and there should be no difficulty for any qualified veterinary surgeon who desires a commission, to serve with a unit in the vicinity of his practice. The time which has to be given to his duties is very small, the expenses *nil*, and the advantages many.

Promotion has recently been made more rapid. After three and a half years as lieutenant an officer is promoted to captain, and after eight and a half years in that rank he is promoted to major; providing, of course, he has made himself efficient and is recommended by his superior officer.

The training previously derived from the Junior and Senior Divisions, Officers Training Corps, would help considerably, should one be appointed to command a veterinary hospital, mobile veterinary section, or veterinary evacuating station. After these commands it is possible to be appointed as Deputy Assistant Director of Veterinary Services, a part-time employment on the staff of Divisional Headquarters, which administers the veterinary personnel of the division. The appointment carries pay and bonus.

The advantages of being a Territorial Army officer are numerous.

First and foremost one prepares himself and offers his services to the Nation in case of imminent national danger or great emergency, in which case the majority of the units would have to be considerably expanded and promotion would in consequence be very rapid for those who are serving and have made themselves efficient. A very wide circle of friends is created in brother officers, and in the case of a country practitioner he would be introduced to various owners of livestock, whose acquaintance, thus made socially, would undoubtedly be advantageous to his practice. The obligations are few—15 days annually at camp, at which pay and allowances are issued at army rates, and attendance at unit headquarters a minimum of ten hours for instructional purposes.

At annual training veterinary units are sent to a seaside or country camp under the command of their veterinary officers, who are responsible for the pay, feeding, and, in fact, everything in connection with the routine training and camp life. This work has been found very interesting and instructive by a large number who have taken commissions in the Royal Army Veterinary Corps, Territorial Army. Experience is derived from attendance at camp as all units of a division, with very few exceptions, are provided with horses and all sick are treated by the veterinary officers.

Usually, every drill night at headquarters during the year is a happy gathering place for officers, N.C.O's and men. For instance, the headquarters of the 47th (2nd London) Division, Royal Army Veterinary Corps (T.A.), which are situated in the Duke of York's Headquarters, Chelsea, is ideal for the purpose for which it exists. It is provided with an officers' mess, sergeants' mess, lecture room, recreation room, and every comfort and inducement to officers, N.C.O's and men, for training and pleasure. Three drill nights are held every week. On Mondays lecture and drills; Tuesdays, riding school in one of the largest military riding schools; the horses being provided by the T.A.; and on Thursdays special lectures are given to men wishing to sit for promotion. The lectures are given by the officers of the R.A.V.C. (T.A.), and each unit has certain N.C.O's who give instruction in foot and rifle drill.

A few vacancies exist in the Royal Army Veterinary Corps, Territorial Army, and it is the duty of every veterinary surgeon to see that these are filled; as the greatest insurance against war is to be prepared. Any Deputy Assistant Director of Veterinary Services of a Territorial Division would be only too pleased to discuss the details of holding a commission with any member of the profession who is interested.

SOME YEOMANRY REMINISCENCES.

By Major HARRY G. LEPPER, M.R.C.V.S.,
(late Regimental Veterinary Officer, Royal Bucks Hussars),

I was gazetted to my county yeomanry (Royal Bucks Hussars) in 1876.

My commission was signed by Queen Victoria. I served for 26 years, attained the rank of major, and never missed an annual training.

During the first few years the horses were stabled in various parts of the town of Buckingham, which was then our headquarters, and miserable places many of them were. There were numerous cases of cough, colds and chest affections. Then they were housed in temporary wooden sheds, with better results. Eventually they were in lines in the open with scarcely a complaint.

With the exception of the band, the great majority of the men rode their own horses or those of friends; there were very few hirelings. They were well turned out and were such a useful lot that several hunter dealers made a rule to attend on the day of inspection to make purchases.

The strength of the regiment was about 450 with 25 officers, and at one time amongst the latter were four masters of hounds. The late Lord Chesham (revered and beloved by all), who was then in command, took his regiment, one of the first to volunteer for foreign service, out to South Africa, where it nobly did its duty in the Boer War.

Well, years rolled on, until 1907, when a scheme was framed under the Territorial and Reserve Forces Act for the establishment of a Territorial Force Association for the County of Bucks, with headquarters at Aylesbury.

At a meeting of this association in 1908, a horse supply committee was appointed, of which I was elected a member. Prizes were given for horses suitable for Army purposes at the county agricultural shows, with a satisfactory result. In 1910 a complete census of the horses in the county was made by the police, which later on was of great assistance when horses were requisitioned in 1914 for the Great War.

In 1921 the Royal Bucks Hussars (Yeomanry) decided to accept conversion into artillery, as there appeared no reasonable chance of the members of yeomanry regiments being retained on a cavalry basis. Two batteries were therefore raised in Buckinghamshire, which, with two assigned to Berkshire, now form the Bucks and Berks Brigade of Yeomanry Artillery. The headquarters of the Brigade are located at Aylesbury.

As regards horses for the artillery, sanction was obtained from the War Office for the purchase of them up to 20 per battery. These

horses are boarded out with baillees on condition that they are available for weekly drills and for the annual camp. So far only 20 horses have been bought, but these purchases have been justified by results and compare very favourably with those supplied by contract. The baillees as a rule have kept them in good working condition.

It is now suggested and we shall probably see at the next annual training that tractors are taking the place of horses.

SOMETHING NEW IN SADDLERY.

Our readers will no doubt have seen in our contemporary, *The Veterinary Record*, of May 1st, 1926, General Eassie's article announcing new ideas about the saddle. We have recently seen his new panel

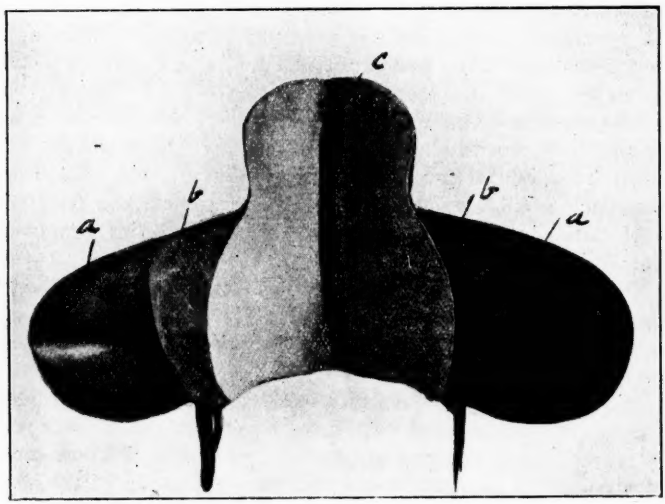

Fig. 1.—Showing the under surface of the saddle and the panel.
(*a*) The flaps of the saddle.
(*b*) The flaps of the panel, which are now the sweatflaps. There is nothing whatever left in the saddle, except that it is lined with light leather to cover the tree and the webbing. The features of the panel are the broad flat expanse of the felt lining and the open air channel (*c*).

actually in being. All that remains of the saddle itself is the tree and the leather of the seat and flaps. The stuffed panel of the saddle and even the sweat flaps disappear entirely. A new and simplified panel takes their place—we think for good and all. This belongs to the horse rather than to the saddle, from which it is distinct. It sits

immovably on the back and all friction takes place upon its surface. It is so constructed moreover, that the narrow saddle tree cannot work into it, the pressure being distributed evenly over the widest possible area. It is lighter than the ordinary saddle panel and has the additional advantage that it leaves a large air channel over the wither

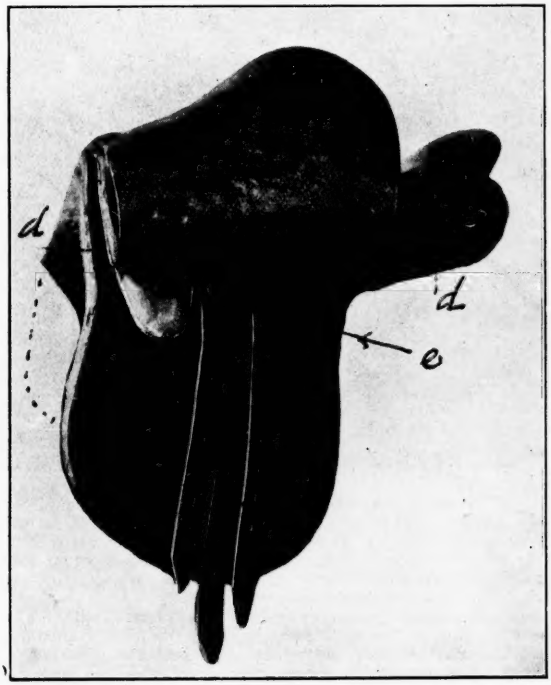

FIG. 2.—Showing another aspect of the saddle and the panel, with the saddle flap held up to show the means of attachment. With the saddle on the horse, all that can be seen of the panel is the bevelled margin of the leather cover at *d* and *d*, the interior padding being quite hidden. The buckle *e* of which, of course, there is one on each side, is the sole means of attachment. The panel is held up into the saddle in this way, and it cannot come down. Any movement of the saddle must occur on the panel, while the panel remains without movement on the back of the horse.

and spine. It seems that this quite simple contrivance rules out all chance of injury whether from pressure or from friction. It is therefore in every sense revolutionary. It is gratifying that most of the progress made in relation to the welfare of the horse has been pioneered by men of our own profession and General Eassie's latest contribution

counts even more in this direction than the liberty system of exercising horses in bulk associated with his name.

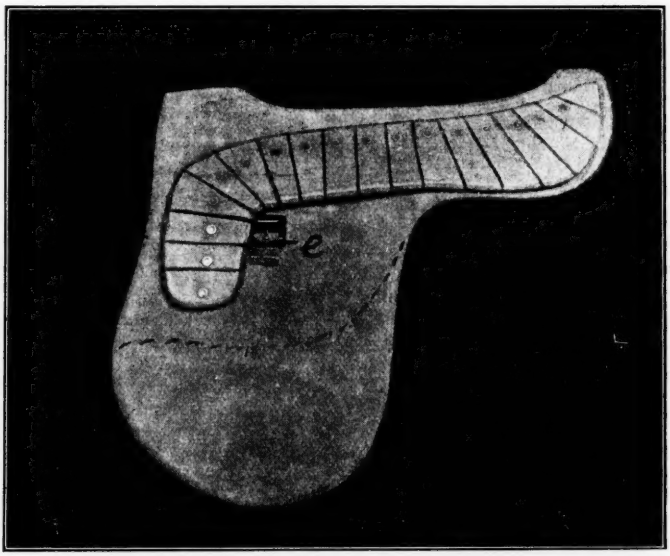

FIG. 3.—Showing the underneath part. This is the under side of one half of the panel. Riveted to the leather cover is a plate of the thinnest three-ply wood. This is cut into sections to make it entirely pliable. The thrust of the narrow saddle tree is across these battens, the effect being that pressure is distributed evenly over the whole weight-bearing surface of the horse's back.
The buckle *e*, shown here in reverse is counter-sunk within a square aperture, so that it lies perfectly flush with the leather outside. The dotted line shows the border of the interior felt covering. The felt remains forever of the same thickness because there is only the even pressure on it, and there is no wear whatever on it because it cannot move.

Provided always that there is *sufficient* padding, the panel forms an impregnable covering for the back of the horse, since neither pressure nor friction can have any effect.

Clinical Articles

THE EXCISION OF ELBOW TUMOURS.

BY MAJOR C. H. S. TOWNSEND, O.B.E., M.C., F.R.C.V.S.,
Royal Army Veterinary Corps.

WHEN a capped elbow becomes hard and indurated, and the ordinary methods to reduce it have failed, excision must be adopted. The usual method by which this is carried out is by making from the middle line of the back of the swelling a vertical incision from top to

bottom, dissecting out the tumour, and stitching the flaps of skin together.

I found by this method that the skin wound never healed by first intention, suppuration nearly always took place, and an ugly scar was left which was liable to be rubbed or opened up when the horse was subsequently allowed to lie down. Better results have been obtained since adopting a slight variation to the usual method of operation, by excising the tumour from the side in the following manner.

1. Make an excision along the outside front edge of the tumour close to its base (from A to B in diagram).

2. Dissect out tumour in usual manner, taking great care not to cut through the skin.

3. Completely suture skin wound by continuous suture, leaving edges of skin everted (as in skin wound for windsucking operation).

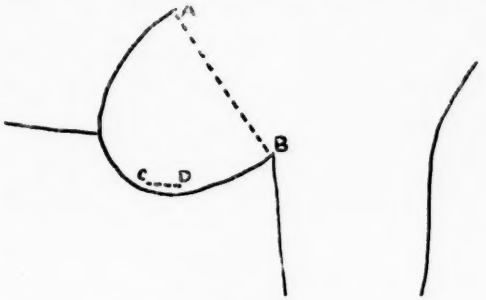

Diagram to illustrate the Excision of Capped Elbow.
A—B=Line of Incision. C—D=Incision for drainage tube.

4. Make a small independent opening about 1 in. long at the lowest part of the tumour and insert a $\frac{1}{2}$-in. drainage tube, which is retained in position by a suture.

5. Do not allow horse to lie down for 21 days, either by keeping the animal on a short rack or preferably in slings.

6. The stitches can be removed in about 10 days by which time the skin wound has generally completely healed. The drainage tube should be removed as soon as all discharge has ceased, which will vary, according to the size of the tumour, from 14 to 21 days.

The points in favour of the above method appear to be the following :–

1. The skin incision being made at a part which is adjacent to healthy normal tissues, the skin heals better than if it were made at the back of the tumour, where the skin is usually hard, unhealthy and possibly ulcerated.

2. The wound is not interfered with when the horse subsequently lies down.

3. By making an independent opening for drainage, the skin wound is given a better chance to heal than would be possible if drainage were allowed from its lower end.

4. On one occasion I operated from the inside edge. This is quite practicable, and might be considered in case of a show horse in which one did not wish to leave any visible scar.

A METHOD OF FIXING A HORSE IN THE DORSAL POSITION AND RETENTION IN THAT POSITION DURING AN OPERATION WITHOUT MANUAL AID.

By Major C. H. S. TOWNSEND, O.B.E., M.C., F.R.C.V.S.,
Royal Army Veterinary Corps.

When it is desired to fix and retain a horse on his back for an operation, it is generally accomplished by means of propping up the animal with sacks of straw or some similar substance, which generally necessitates a man standing on either side to keep them in position,

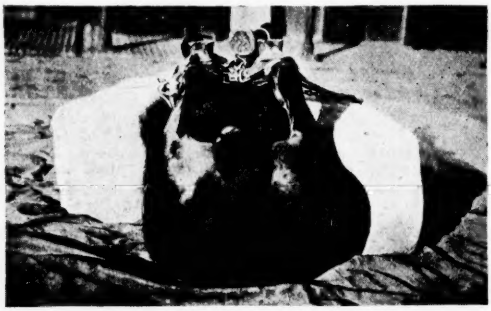

Fig. 1.

and even then especially if there is any struggling the horse will slip from the perpendicular, probably during a critical stage of the operation.

I do not know if the method I am about to describe is commonly used or not, but I have never seen it recorded, and therefore thought it might be worth while describing.

Two bales of compressed hay or straw (weighing generally about 130 lbs.) and two pieces of rope 20 feet long are the only articles required. If the compressed bales of hay or straw are not available, ordinary 50 lb. bales, although not quite so suitable, will answer.

After casting the horse with hobbles, a rope is placed round each

hind fetlock and brought round the back to the opposite side, the ends being left loose.

The animal is then pulled up on his back, and the ropes placed round the bales on the *opposite* side to which they were first attached, and fastened to the opposite fore fetlock, both pulled tight and tied together.

For example, when fixed in position one rope will start at the N.H. fetlock, go down the near side ribs, under the back to the off side, round the bale of hay, round the off fore fetlock, and twisted round the rope from the O.H. and tied. The other will be vice versa.

FIG. 2.

Although this sounds rather complicated, it is not really so, and does not take more than a minute to perform. The diagram explains it better than my description.

Once the animal is fastened in this way no manual aid is required in keeping it in the dorsal position for any length of time, as the bales cannot get out of place, no matter how the animal struggles.

In this hospital this method has been used for over 200 horses during the last year with no untoward results, and by trussing a horse up by this method I have several times performed the roaring operation under a local anæsthetic with the aid of only one man to keep the head level.

The above method might be useful to country practitioners who, I know, often have difficulty in obtaining plenty of aid when they wish to operate at outlying farms.

TRAUMATIC OMARTHRITIS.

BY MAJOR J. R. HODGKINS, D.S.O., F.R.C.V.S.,
Royal Army Veterinary Corps.

IN the "Veterinary Record" the writer has recorded a case of this very unusual accident in 1913, since when, until the other day (even through the War), he had not met with a second case.

In the first instance, fortunately, as the wound was small, the skin wound did not coincide with the wound into the capsule of the joint, the case came under treatment at once; and, although there was muscular atrophy, the animal recovered completely.

This second case was that of a fourteen-year-old light draught mare belonging to an Artillery unit in practice camp several miles from the hospital.

The animal received a kick on the off shoulder whilst grazing.

It was brought to hospital in the motor ambulance and placed in slings.

On the next day there was a synovial discharge from the wound. The wound was about two inches long, the swelling around the point of the shoulder considerable, and the animal was in great pain. In spite of careful antiseptic treatment the discharge became purulent. On the seventh day after the accident, as there was no amelioration of the condition, it was considered preferable to have the animal destroyed.

DETACHMENT OF THE EXTERNAL LATERAL LIGAMENT OF THE FEMORO-TIBIAL ARTICULATION.

By Major A S. LAWRIE,
Royal Army Veterinary Corps.

Subject.—A Government charger, a nine-year-old gelding belonging to the Adjutant of the 3rd Field Brigade, R.A., stationed at Deepcut.

The patient was found very lame in the loose box at 4 p.m. on October 2nd. At morning stables the animal had been perfectly sound. It was first examined by the Farrier-Quartermaster-Sergeant, who found a painful swelling in the off stifle region. On the following morning the lameness was more severe and the enlargement of the stifle region much increased, particularly on the anterior aspect. By the next day the swelling and lameness had become so excessive that the animal was unable to put the foot to the ground without showing very great pain in the attempt. The limb was adducted and the toe of the foot resting on the ground.

As there was no positive indication of a fracture in any part of the limb, a severe injury, or more probably a rupture of one or more of the ligaments of the stifle region, was suspected.

An attempt was made to put the patient into slings, but the horse fought against this so much that the attempt was abandoned and it was considered inadvisable even to put him into a motor ambulance for transference to the Station Veterinary Hospital. The stifle region was fomented, and at the end of a week there was a slight improvement,

the animal placing a little weight on the limb and lying down and rising without much difficulty. The improvement continued until the 17th, when, at early morning stables, the horse was found lying in the box and unable to rise even with assistance.

The symptoms were those of profuse perspiration, great restlessness, loss of appetite and a temperature of 103°. Being made as comfortable as possible and carefully turned over at short intervals, on the next day the horse got up, after great difficulty, unaided, just as preparations were being made for another attempt. This time the slings were put on and fixed without difficulty, and as soon as they were adjusted the animal literally threw its whole weight into them and rested with both hind feet off the ground. For several days a slight, but gradual, improvement was shown ; the temperature falling to normal, the appetite improving, and the case appearing hopeful for the first time. On the 23rd, however, the patient again showed very great pain, sweating and becoming very restless in the slings, which chafed and made sores, whilst the temperature still kept about 103°. A good bed was provided and the slings lowered.

Destruction became necessary the following day.

Post-Mortem Examination.—There was a great deal of swelling in the stifle region. When this was incised a large quantity of dark coloured exudate in a partially coagulated condition was found between the muscles and in the tendon sheaths. The external lateral ligament of the femero-tibial articulation had been torn away from its attachments to the femur and tibia, and in the lacerated ends of the ligament very small pieces of bone could be felt. The ligament was in a pulpy condition, and there was a great deal of blood extravasation around and into the joint. All the other ligaments of this and of the patella articulation were normal. As it was felt that there might still be a partial fracture of either the distal end of the femur or of the head of the tibia, the bones were boiled out. It was then found that quite an appreciable portion of the bones had been torn away with the detached ligament, and particularly was this the case with the femur from which half an inch of the articular surface had been removed.

No feasible cause for this injury could be traced.

The patient was a big loosely-coupled horse, awkward in the stable, and inclined to slip about more than the average. The injury was probably caused by the off hind foot becoming fixed in such a way that the whole weight of the body was thrown on to the torn ligaments, etc., of the external aspect of the limb.

Notices

COLONIAL APPOINTMENTS.

The following officers have been selected for veterinary appointments in the Colonial Service :—

M. A. MOLLOY, M.R.C.V.S., Veterinary Officer, Tanganyika Territory.
E. T. FERN, M.R.C.V.S., Veterinary Officer, Northern Rhodesia.
N. CLARKE, M.R.C.V.S., Veterinary Officer, Northern Nigeria.
J. R. HUDSON, B.Sc., M.R.C.V.S., Veterinary Officer, Kenya.
J. McDONALD, M.R.C.V.S., Veterinary Officer, Gold Coast.
T. F. O'BRIEN, M.R.C.V.S., Veterinary Officer, Northern Nigeria.
E. BEAUMONT, M.R.C.V.S., Veterinary Officer, Kenya.
R. C. M. FISHER, M.R.C.V.S., D.V.S.M., Veterinary Officer, Uganda.
R. W. M. METTAM, M.Sc., M.R.C.V.S., Veterinary Research Officer, Kenya.
D. L. O'BRIEN, M.R.C.V.S., Veterinary Officer, Uganda.
G. ROCKER, M.R.C.V.S., Veterinary Surgeon, Straits Settlements.
W. A. ALLAN, M.R.C.V.S., Veterinary Officer, Uganda.

ANIMAL PSYCHIATRY AT THE OLYMPIA CIRCUS LONDON.

CAPT. BERTRAM MILLS has again put before his Olympia audiences one of the most wonderfully trained collection of animals in the world and, if only to make a study of the psychiatry of the animal brain, the show is one which every veterinary surgeon ought to try to visit. The animals include such widely diverse species as horses, elephants, dogs, and lions, and the excellent condition of appearance, together with the apparent delight with which they one and all carry out their allotted tricks, give denial to the idea that they have been trained by any other plan than that of patience and kindness.

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